

E.XII 5
19

ABSTRACT

FROM

The Regulations of the Library.

4.—That all books shall be returned half-yearly, in order that they may be inspected by the Honorary Secretaries.

5.—That any member detaining a book beyond the time prescribed by the rules, shall be fined 6d. per day for each volume so detained. *after it has been applied for by the Secretary*

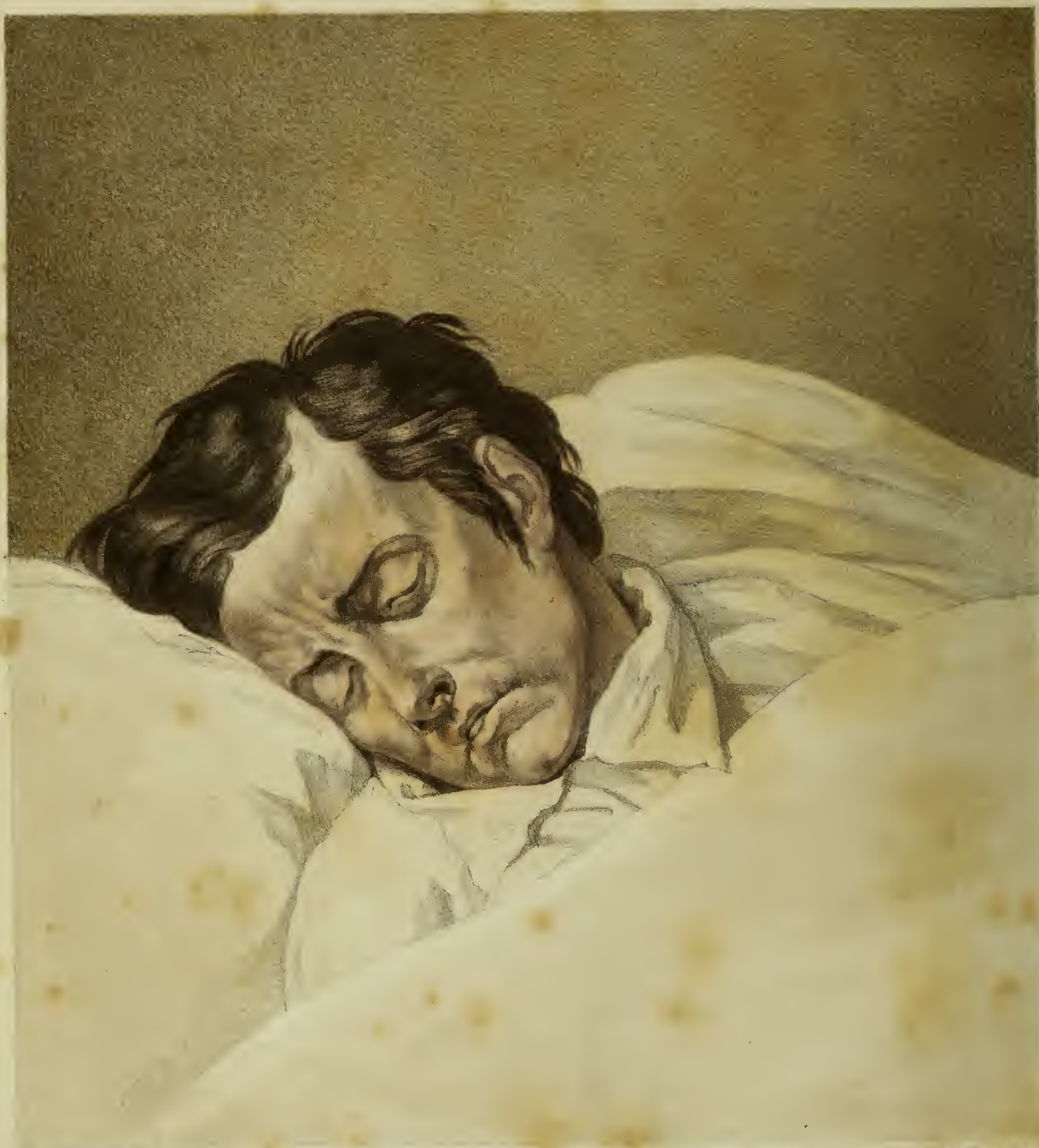
6.—That if any book be in any manner injured, the same shall be taken at cost price by the member in whose possession it was so damaged; or if any book be lost, the member to whom it was last delivered shall forfeit its published price.

7.—That no member shall be allowed to lend a book belonging to the society.



Digitized by the Internet Archive
in 2016 with funding from
Wellcome Library

<https://archive.org/details/b22011833>



THORACIC DERANGEMENT.

92002

THE
P H Y S I O G N O M Y
OF
D I S E A S E S.



BY
GEORGE CORFE, M.D.
RESIDENT MEDICAL OFFICER AT THE MIDDLESEX HOSPITAL,
AND AUTHOR OF A POPULAR TREATISE ON THE KIDNEY; MESMERISM TRIED BY THE TOUCHSTONE OF TRUTH;
ESSAY ON THE WOLVERTON WATERS, &c.

LONDON:
JAMES NISBET & CO. 21, BERNERS STREET.
1849.



LONDON:
GILBERT & RIVINGTON, PRINTERS,
ST. JOHN'S SQUARE.

TO
HIS GRACE THE DUKE OF NORTHUMBERLAND,

PRESIDENT OF THE MIDDLESEX HOSPITAL,

&c. &c. &c.

MY LORD DUKE,

WITH deep feelings of gratification at your Grace's condescension in permitting me to inscribe the accompanying pages with your noble name, I venture now to do so, while I desire to present my grateful thanks for the honour and favour thus bestowed upon me.

The moment for penning this little address seems to be one, in which some reminiscences that belong to the valuable Institution which the noble house of Percy has, for above a century, cherished, presided over, and adorned, may very naturally arise; and, as a resident in the building of nearly twenty years, I trust your Grace will, with the amiable affability by which you have been so truly known, since the ducal coronet has encircled your brow and since you have accepted the engagement of our President, excuse the prolixity of your servant, whose interests are so identified with those of the place where he has so long held office and resided.

The year 1845 completed the century in which this Hospital has had its name, although not in one and the same edifice. Like many other institutions of charity, its beginning was small; but, as time rolled on, its powers, and capabilities, and advantages were increased. Additions were made to the present building, and extension and stability were imparted to the internal economy of every department, and thus, like the source of our proudest rivers, they spring up, forming their own centre; progressing forward; acting and receiving back; spreading their benefits, as they swell and overflow in the receiving their tributary streams; and at length, merging into the wide waters of the ocean, become the wealth and the pride of nations.

So this Institution, in its progress, has dispensed her benefits far and wide, and has, as the Eternal Truth of Scripture, in its own majesty, expresses itself, "in watering others, been watered herself." The very beings for whom the Institution was maintained, and in its origin, grew, out of the munificence of Hugh, Duke of Northumberland, have in their order unconsciously formed a re-action, in presenting the most perfect specimens of acute and severe disease to the eye of student and professor; and thus a valuable store-house of information has displayed its painful scenes, and hence, too, in the re-action, has produced a nucleus for a school of medicine, from whose bosom have sprung some of the most practical men of the medical world.

But as the smothering ivy clings sometimes round the oak, and grooves its bark with her corroding arms, and as the stately cedar may be punctured by the silent worm; so into the best arranged economy there may creep the withering blight of abuses, which abuses would, if left unheeded, eat up the very vitals of the fabric, and in time leave it but a name.

Your Grace, as our President, is well aware of the nature of the grievances which the Charity laboured under, when the noblemen and gentlemen, who so honourably stepped forward in the crisis, threw down the gauntlet to our foes, Disorder and Devastation. The struggle was arduous; but honour, truth, uprightness, and impartiality in those gentlemen won the day; and, when your Grace presided at the late Anniversary, reports were made and authenticated documents were produced, which created astonishment and admiration in the company assembled, and afterwards in every person who heard them, that so many hours of severe and disinterested labour could, and

should have been spared day after day, and evening after evening, by the new Weekly Board, to the re-modelling, rectifying, and improving of an establishment wholly dedicated to the service of the poor*.

I believe our Noble President does highly value the exertions of his Board of Governors; but could your Grace be set in a niche of the edifice, and watch its improved working, as I am enabled to do by close contact and unavoidable official scrutiny, you would, even more than you at present can, appreciate the kindness, the generous effort, the talent, the perseverance, and the straightforward dealing of your unwearied and honourable coadjutors.

It becomes not a Christian to flatter; and that cause must be insignificant or weak which can be furthered only by compliment; yet truth may sometimes seem to put on the phraseology which belongs to the former. However this be, truth must stand in her own rectitude, and must in the end prevail. I would, then, desire to join my humble voice in accordance with the mass of Governors, among whom I have the pleasure to form one, and to express, with them, my extreme gratification that we have a President worthy of our Weekly Board, and a Weekly Board worthy of such a President; both ready to stand by the weak; to relieve the oppressed; to rectify abuse; to listen to grievances; to encourage the industrious; to reward the laborious; to dispense favours with impartiality; to be slow to judge, and firm in pronouncing sentence; who desire to be generous without extravagance; indulgent to the patient; liberal to the officer; friendly to the student; and considerate to the servant.

And now, my Lord Duke, it remains for me to offer to your Grace my fervent and humble wishes for your Grace's happiness. May the King of kings and Lord of lords bless your Grace with health and true wisdom to fill your responsible and princely station in our land. "By me," says the LORD JEHOVAH, "kings reign and princes decree justice:" "I kill, I make alive; I wound and I heal;" and so indeed He does, and the high prerogatives are His alone. May He graciously bless and uphold you spiritually, as well as temporally; and may you long be spared to adorn the court of our beloved Queen; to govern your wide domains; and to dispense benefits to your fellow-creatures. With grateful feelings towards you for your unaffected condescension and urbanity towards myself,

I have the honour to be,

My Lord Duke,

Your faithful and obliged humble servant,

GEORGE CORFE.

*Middlesex Hospital,
August, 1849.*

* The persevering labours of these gentlemen can only be understood by the amazing improvements of the Middlesex Hospital, internally and externally, in the short space of two years and a half. They composed a board, which sat in committees, for the building; for the house affairs; for medical arrangements; for every department;—two, three, and four, in one day. As many as twelve committees have sat in one week, at different periods, to investigate every abuse, and to consult on every improvement. It might be considered complimentary in an officer of the Charity to single out individual names, yet I cannot refrain from alluding to the indefatigable exertions of the Hon. J. W. Percy, who rose, night after night, from his bed, and was seen by me when I was up for duty, at one, two, and three o'clock, in cold and piercing weather, patrolling the building, quietly visiting the wards to see if the night-nurses were at their post and awake to their duties, and if the patients were properly attended to. Such exertions, in such a cause, speak louder than words. Indeed, no minute part of the building, or of the general economy of the place, escaped the vigilant eye of this young nobleman. One of the plans of our windows was his sole invention. It is admirably constructed to let in air when the patient or nurse is not using the washing apparatus under it; but, when the ablution is over, a simple trap falls up, as the window is shut, and exposes the drain to the air, and excludes all draught from the room. Perfection can never be attained on earth, neither can there be found any great establishment without its weak points and flaws; but so many and so great efforts to attain and to maintain a system of order, convenience, and comfort, in deep submission to the Divine will, are most likely to be, and have now been blessed with most gratifying success. Neither can I forbear availing myself of this opportunity to mention the kind and handsome manner in which the Weekly Board acknowledged their satisfaction in my exertions, and suggestions for any improvements during the progress of the building, and my endeavours to fulfil my peculiar duties, &c., by presenting me with a gratuity, besides an increase of annual emolument, thus enabling me to do what I had for some time previously greatly desired, which was, the taking my degree at the King's College and University of Aberdeen, it not being compatible with my office to present myself at the Royal College of Physicians of London; for which, and for other kindnesses, I do desire thus publicly to offer them those thanks which are so justly their due.

P R E F A C E.

HOWEVER small this Volume may be, the original papers would have been even more condensed, had not the writer met with such encouragement from communications addressed to himself, as well as to the Editor of the journal in which they first appeared. General practitioners from various parts of the British islands have expressed their wishes that the work might be separately published ; in consequence of which, the book is now sent forth, with a few additions to the original papers.

PHYSIOGNOMICAL CHARACTERS OF FRONTISPIECE.

THORACIC DERANGEMENT ; COUNTENANCE DUSKY.

The *alæ nasi* move freely in respiration ; the nostrils are widely dilated ; the mouth is slightly open ; anguish and distress, consequent upon acute thoracic inflammation, is also depicted in the depression of the angles of the nose and mouth. The whole face is of an extreme pale dusky hue. Eyes heavy and dull ; depressed lids and knitted brows, denoting active cerebral disturbance.

The case is one of Exo and Endo-Carditis, supervening on the slightest attack only of Rheumatism, in a lad of nineteen, and is referred to at page 63, with low muttering delirium ; together with an attrition, and a mitral bruit ; the latter never subsided on his discharge from the Hospital.

CONTENTS.

	PAGE
INTRODUCTION	1
CLASSIFICATION OF DISEASES	6

CLASS I.

DIVISION I.

CEREBRAL DISEASES IN INSENSIBILITY; COUNTENANCE LETHARGIC.

Apoplexy	11
Ramollissement	12
Otitis	15
Malignant Disease of the Brain, or Tumours	16
Aneurism of the internal Carotid Artery. Paralysis of the diseased side of the Body	18
Arachnitis	19
Acute Meningitis—Hydrocephalus—Softening of the Spinal Cord oppo- site the second and third Cervical Vertebrae	20

DIVISION II.

CEREBRAL ASPHYXIA IN STUPOR; COUNTENANCE LIVID.

Narcotic Poisons	21
Apoplexia Renalis	24
Coma, or temporary loss of Consciousness from Bile, Worms, &c., or other Irritants	26
Cerebral Disturbance the result of Uterine Disorder	29
Intoxication	32

DIVISION III.

CEREBRAL SYMPATHIES IN IRRATIONALITY; COUNTENANCE DISTRESSED.

Delirium Tremens	35
Delirium in Fever	40
Delirium in Pneumonia	41
Delirium in Pericarditis	42
Delirium in Enteritis	44
Delirium in Hysteria	ib.
Delirium in Chorea; Mania	49
Paralysis Agitans; Paralysis e Veneno	ib.

CLASS II.

DIVISION I.

THORACIC DERANGEMENT; COUNTENANCE DUSKY.

	PAGE
Heautophonies	56
Alphabet of Auscultation	57
Pneumonia or Pleuro-Pneumonia	61
Bronchitis	62
Rheumatism; Endo and Exo Carditis; fatal	64

DIVISION II.

THORACIC DERANGEMENT; COUNTENANCE ANXIOUS.

Laryngitis	65
Tracheitis	70
Empyema	ib.
Pleurodynia and Spasm of the Diaphragm	71

DIVISION III.

THORACIC DERANGEMENT; COUNTENANCE OF PECULIAR HUES.

Cardiac Disease	72
Hydrops Pericardii	74
Hydrothorax or Dropsy of the Pleurae	ib.
Emphysema Pulmonum	ib.
Dropsy or Edema of the Lung	75
Hepato-Cardiac Dropsy	79

CLASS III.

DIVISION I.

EMACIATION OF FRAME; COUNTENANCE OF PECULIAR HUES.

Phthisis	81
Scirrhus of the Stomach	85
Carcinoma Uteri	86

DIVISION II.

EMACIATION OF FRAME; COUNTENANCE OF PECULIAR HUES.

Views of the Anatomy of the Kidney, as published by the Author, in 1839	87
Comparative Analysis of the Structure and of the Functions of the Liver and Kidney, in gradation, up to the Human Subject	92
Dropsy	94
Renal Disease	97
Scrofulous Enlargements of the Mesenteric Glands	102

CLASS IV.

DIVISION I.

ABDOMINAL SEIZURES; COUNTENANCE PINCHED.

	PAGE
Colic or Peritonitis	102
Obstipation during a fortnight; Reducible Hernia; Passage of Biliary Calculus	105
False Peritonitis	106
Gastralgia	108
Malignant Cholera	110

CLASS V.

DIVISION I.

ENLARGEMENT OF ORGANS, GLANDS, &c.; COUNTENANCE,
ACCORDING TO ACUTE OR CHRONIC STAGE, HARASSED, &c.

Goitre	111
Tonsillitis, Cynanche parotidea, and Glossitis	<i>ib.</i>
Serofula	112

DIVISION II.

ENLARGEMENT OF ORGANS, GLANDS, &c.; COUNTENANCE
CAREWORN.

Dropsy	113
Ascites.—Pericardium adherent	116

	PAGE
Ovarian Dropsy.—Extensive Ulceration of the Stomach	118
Tympanitis, or Meteorismus	119
Paraplegia from partial obliteration of the Spinal Chord, the result of an Hydatid Tumour in it	120
Diseases or Disorders of the Liver	121
_____ of the Spleen	127
Tumours	128
Aneurism of the Aorta; Obstruction in and Laceration of the Supe- rior Vena Cava; Œdema of the upper half of the Body	130

CLASS VI.

DIVISION I.

VASCULAR DISEASES IN EXCITEMENT; COUNTENANCE
FLUSHED.

Erysipelas	133
Prurigo, Psora, and Scabies	134
Herpes Zoster	135
Urticaria	<i>ib.</i>
Phlebitis	143
Rubeoloid Fever	145

DIVISION II.

VASCULAR DISEASES IN ATONY; COUNTENANCE LANGUID.

Sea Scurvy	147
Purpura	<i>ib.</i>
Erythema nodosum	<i>ib.</i>

THE PHYSIOGNOMY OF DISEASES,

&c.

INTRODUCTION.

IN the course of nearly eighteen years' residence in the Middlesex Hospital, where twelve or thirteen thousand patients are annually relieved, it has often struck me, amidst the vast number of cases of disease by which I am surrounded, that such stores of information as are therein presented to the eyes of students, ought not to be allowed, as it were, to run to waste; but that gleanings might be largely collected, in order that the general features of this mass of knowledge might be recorded in a somewhat profitable manner.

Amidst the continual change of patients whom I have to receive and watch over, and the progress of whose diseases I have to notice in the course of my duties, in two, three, or more diurnal visits to the medical wards, it may be seen that very rare cases pass on, cured, or otherwise ending in death. Common cases occur with exceedingly curious symptoms superadded to the ordinary ones; all of general interest to the medical man. They are seen and they vanish, to make way for another dense mass of objects, presenting more or less of curious feature to the observant eye; and thus the year rolls out and numbers its ten, twelve, or fourteen thousand in our institution, and, like the shores of the ever-full ocean, the tide ebbs but to fill again.

I have been solicited by a valued friend to put some of these pictures on paper, in connection with my own ideas and remarks; and I feel inclined, if my life should be spared by Him who holds our breath in his Divine hands, according to his own declaration, so to do. And here I must observe, that though I love my profession, and will give place to no man in admiration of the talent and skill which adorn this hospital, as well as many other metropolitan institutions of the same kind, or the distinguished names which shine in private practice, I nevertheless am bold to declare that I consider God alone The One who kills and who makes alive*, who wounds and who heals; and in these days of profanity on the one hand, and of hypocrisy on the other, I consider that a man should

* The Lord God, as a Sovereign, gives command. He wounds by instrumentality, and heals in the tender mercies which are over all his works, at once, by His own word. "He sent his word and healed them" (Psalm cxlvii.) has a temporal as well as a spiritual meaning. It appears from Scripture, that the enemy of man is empowered for the work of death and disease. The Lord gave leave, and "so went forth Satan from the presence of the Lord," commission in hand, to smite with sore diseases, but not to kill. (Job ii., &c.) Also, the Prince of Life and Glory, the Lord Jesus Christ, as recorded by the Holy Ghost, said, "Ought not this woman, whom Satan hath bound" (with some sore affliction of body), "lo! these eighteen years, to be loosed from her infirmity," &c. The same enemy, through sin, has the power of death, when leave is given from Him "who holds the breath of man in his hand;" thus, "him who has the power of death, that is, the devil." (Hebrews ii.) Satan had permission and command, first, to slay and to destroy what Job had—children, servants, cattle, &c. He was restrained from touching Job. Afterwards he was empowered to touch Job with disease, but to withhold the stroke from "his life." (Chaps. i. and ii.) In earthly matters, a master or governor does not himself destroy—he gives the order to the executioner; or he lets loose upon one animal another whose nature it is to wage war against the first. Thus the dog baits the bull, worries the fox and hare, and destroys the rat, &c., by command of him who is said to do it himself—as the cat is let loose upon the mouse by the owner's command or hand; they act but in agreement with their destructive natures. The Lord wounds by instrumentality: as in the pestilence, famine, or the sword, &c. &c., whether it be against a nation or an individual: thus, the King of Israel being offered one of these three, the pestilence was chosen, and it fell upon the nation, destroying 70,000 men. He heals by his own Almighty word: "He sent his word, and healed them, and delivered them from their destructions." (Psalm cvii.)

speak plainly, that the principles which sway him may at once be known; and herein God must be magnified, since, of ourselves, we should shrink from the expression of religious influence, unless the Lord bestowed His powerful grace accordingly.

Thus, my belief is, that the Lord Jehovah blesses the prescriptions, and advice, and experience of a talented physician, when such is his almighty will; and that, on another occasion, with the same form of disease, the patient of the same sex and age, with symptoms closely similar, with the same care bestowed by the same accomplished physician—that, notwithstanding, the patient dies; because man has an appointed time for death, and go he must when it comes, whether suddenly, in the pride and vigour of his step, or slowly, by the attenuating disease. Thus, I desire to give the glory to God, which is his due, in his designs, and in his workings in Nature, Providence, and Grace; and I believe his government of every object, however minute, or however immense, to be as absolute as it is wise; and as good as it is perfect; and so will be found to be, at the winding up of all things in the Great Day.

In the course of my experience I have often had occasion to remark one point especially, to which, indeed, my attention was early led by my valued and talented master, Dr. Latham, whilst he held the office of physician to St. Bartholomew's Hospital, where I was a student under his tuition; namely, the physiognomy of disease in its assimilative character; and since I have entered the Middlesex Hospital, I have had occasion to observe the fatal results which have taken place too often, from the medical man out of doors having mistaken one disease for another, and treated the patient accordingly; so that he has applied to us for advice in a hopeless condition.

When, therefore, preparatory to the visits of the physicians, I have had to make mine, I have endeavoured to impress upon the minds of those pupils who were pleased to accompany me, the very great importance of the study of disease through the index of the countenance—the features of the face—the air, gait (if able to walk); the manner, cast, colour, turn, expression, silent or speaking language, implied or indicated by words or signs, so that almost on the first glance one might say, “hepatic,” “cardiac,” “renal,” “uterine,” “cerebral,” &c. &c.

It is related of the celebrated physician Andral, so famed for decision upon physiognomical presentation, that the moment his penetrating eye surveys the features of a patient who has some hidden disease stealing on, he will immediately detect and declare it to those around him; but especially keen is the discrimination which he is able to make from the eye of a fever patient who has passed a tranquil and refreshing night, or a restless and disturbed one.

The medical student who carefully notices the cases in our London hospitals, and who is not altogether ignorant of country practice, may be struck with one thing: the fierce aspect of many diseases which, out of doors, or in the provincial small towns and hamlets, bear generally a mild and tractable character.

The reasons I conceive to be mainly these:—First, that hospitals, and metropolitan ones especially, contain the working and lower classes of the people, who live in unwholesome kitchens, feed upon the most unhealthy articles of diet, and allow their bodies to be filthily dirty beyond conception, however smart and neat the outside appearance*. These persons are more than ever brought up with unbridled passions and tempers, in which they indulge in after life, carrying their whims, fancies, and leadings, into any and every extravagance, to the total neglect of all good advice from wise relatives or superiors. Secondly, that this class of persons are immoderately fond of all medicines or compounds, quack or otherwise †.

* A butler, some time since, who was in the habit of gaining a livelihood by attending large dinner parties as a waiter, fell down in a fit, whilst so engaged at the table of one of our splendid mansions at the west-end of the town. On his admission here, his head was ordered to be shaved, when he was found to be literally overrun with pediculi and pruriginous eruptions.

A married sempstress was under the care of the physician, as an out-patient, with the most inveterate form of scabies and itch combined, whose employment was to attend daily in one of our largest hotels at the west-end, to keep in order the stock of linen; and this she did during the whole time she was under treatment, and prior to her attendance as a patient.

† There is hardly a servant in private families who will throw away a few pills, or some untouched draughts, &c. A lady, whom I know, ordered her own maid to carry down some draughts in phials, to pour out the contents, and to put away the bottles. The cook, seeing her take the phials to the sink, declared it was shocking extravagance to throw away physic. “Do give me some of it,” she said. She accordingly emptied four bottles into a basin, and drank off the whole quantity: then, shaking her head, she obtained a raw carrot from the pantry and ate that, to take away the nausea!

The more medicine our patients have, the better pleased they are. It is most amusing to see the scribe of the ward, with spectacles on his nose, poring over the medicine tray, with the crowd around him, while he eagerly looks over the bottles, remarking, “There is some nice red medicine for you, Mr. —;” “That is strong stuff for you, Mr. —;” and “Here's your new medicine, Mr. —;” &c. &c.; and it is laughable to see the satisfaction with which an Irishman, especially, swallows down a black draught, and drains the glass to the very last drop; saying, as on one occasion, “Thank'ye, your honour; that's the first bit of victuals I've had these two days.”

Every neighbour has a remedy to recommend for every ache and pain, and the one person is no readier to recommend, than the other is to try the same. These persons physic themselves, too, with enormous doses of such things as salts, sulphur, calomel, and purgative pills, &c. &c.; and they often insist on being bled without any advice whatever; they go to the patent-medicine warehouses, and buy any nostrum whose title has struck them outside the window, or which some friend has suggested. A young woman was lately brought into our wards in a frightful state of pyalism, from only taking two powders, bought in such haphazard way at a patent-medicine warehouse near at hand. Thirdly, when these people are seriously ill, and the disease is set up, in however severe a form, they still go on, utterly reckless, apparently, of life or health; and the friends, though ready with their tears for their sufferings, are just of the same stamp with themselves. They have been known to bring a heavy-cruste'd meat-pie in their arms, with a baby seated on the top of it, in order to feed a sister just merging from the most severe attack of gastro-enteric fever. A man has brought a beef-steak pudding, in the crown of his hat, to his wife, ill with pneumonia; and the wife has brought her husband pork and greens in a teapot, and they have been detected eating them together, although the patient has just recovered from a dangerous attack of enteritis.

A porter is not always vigilant, nor is a nurse always faithful to her duty; it would be scarcely credited, if a long list of the contraband eatables, which are hebdomably seized in our public hall, was submitted to an intelligent mind. The cant phrase, "Poor thing, it will do him or her good, if he or she can only get it down," has beguiled many; and even an apoplectic man has had some article of cookery surreptitiously brought in and stuffed down his throat by this ignorant, mock, and wicked pity. We have not only found out and detained every kind of improper food at the entrance of the hospital, but we have also detected the same in the hurried circulation, the oppressed breathing, the swollen epigastrium, and the hot skin, with returning delirium, in the patient. And, if such be the case where so much pains are taken to compel a proper regimen, what must there be of reckless cramming of the stomach where such restrictions exist not, as in the little private home! Thus, without restraint on the passions, unbridled tempers, full indulgence of appetite in any eatable or ardent spirit that is within the means to obtain, disregard of the best medical advice and orders, wicked folly of friends and their example, and a readiness to swallow any nostrum recommended by the ignorant, we may form some notion why diseases are seen to assume the appearance they do in our institutions: joined to these, also, may be added constitutions unstrung by the free use of tea and ardent spirits, general irregularities, with poverty, and anxiety, and care.

On the other hand, the general practitioner expects, and for the most part obtains, in private practice, the most implicit obedience to his rules and orders. He, also, with the physician, has another advantage, that in the ushering in of a disease he is applied to; and, although the perfectly-developed features of a serious disorder may not be, as yet, so portrayed as to enable his mind to catch the real character of the approaching disease, yet experience and a quick eye master even this difficulty in time; and the sickening stage has also its small index, however minute the points of the dial, and however illegible the characters. The practitioner has an opportunity of witnessing the early stage of every disease, whilst these accessions are rarely met with in an hospital. Here we see disease at its height running down to death, or disease at its height running up to convalescence; but disease at its height as seen from the spring-head of its onset we rarely have a full opportunity of viewing. It seems, therefore, probable that the main reason why the private practitioner may be often misled in the formation of a correct diagnosis of an approaching malady is, that he is perplexed by the presence of so many minor symptoms and feeble outlines of the disease; whilst the hospital practitioner has the privilege of viewing the broad features of the enemy, and is, therefore, not led astray by the contradictory statements and feelings of the patient. In short, I think it may be said that the diagnosis of diseases in hospitals is less perplexing to the general practitioner than is the detection of the trifling *malaise* in private by the hospital practitioner.

The advantages of both experiences combined must be very great. The hospital physician and surgeon alone enjoy them. It is true that the perpetual pupil engaged for years in private practice has free access to the wards; but with him time cannot be spared for these visits. Neither is his duty involved in regular attendance, as is the case with the hospital physician and surgeon.

The fastidiousness and folly of the rich and noble classes of society, and their terror of death, which the poor

often look upon with recklessness or a stupid indifference, induce them to send frequently for the physician, when scarcely any bodily complaint exists. A friend of mine was requested to call in an eminent physician to a young lady making very great complaints of indisposition; the noble-minded man cast his eye on the lady, asked a few questions, and then turned away, to the astonishment of my friend, who, on taking him aside, heard him declare there was nothing whatever the matter with the supposed patient. It was entirely put on; and very angry was she, when informed that the physician, who knew her better than my friend, said he should call no more. Now, the fond mother of that young girl would most willingly have paid ten or twenty guineas in fees for her darling and only daughter; but Dr. — was too noble to pander to the folly and vices of persons in high or low life. Indeed, nothing makes those of all classes more enraged than to tell them they are very well, when they positively declare, and insist upon it, that they are very ill. Notwithstanding which, the truth is The Truth; and that lip which flinches least from declaring it, will, in the long run, obtain most of honour, confidence, esteem, and respect from every liberal-minded employer.

It has been remarked that diseases are, for the most part, somewhat advanced when patients are admitted into the hospital; some of them have been sadly neglected, or mistaken by a general practitioner, who having, unhappily, set out in life by mistaking mere fancy either for tact, or bent of genius, has fixed on the profession of medicine; in which hard study, and a consequent rich harvest of knowledge, with clinical experience in all the wards of an hospital, have been held as disagreeable works of supererogation*.

The most severe lacerations and injuries to which the human frame can be liable are found in our hospital surgeries: some of them, most trifling to appearance, ending in death; and others, of the severest form, rallying and healing up under the mode of treatment prescribed.

These are facts as incontrovertible as they are extraordinary, and tend to show us that God is indeed the Supreme Governor of nations, thrones, and individuals; of life, of health, and of death.

The study of physiognomy was much attended to amongst the Greeks and ancient philosophers, but was not revived until the middle ages†. Baptista Porta, a physiognomist of great eminence, wrote a treatise “On the Physiognomy of Plants and of Birds.” The “*Magia Physiognomica*” of Gaspar Schottus, the work of Boyle, and lastly, the elaborate treatise of that singularly gifted author, Lavater, have reduced the subject to some definite and scientific principles.

Haller thus expresses himself: “It is the will of God, the great author of society, that the affections of the mind should express themselves by the voice, the gestures, but especially by the countenance. Nor is this species of language wholly denied even to the brute creation. They, too, by signs, express their love of kind, social friendship, maternal affection, rage, joy, grief, fear, and all the more violent emotions. A dog easily discovers whether you be angry with him, by your face and tone of voice. The bellowing of the bull, and the roaring of the lion, are indicative language, too well understood to be controverted. I shall say little of sound, though it is undeniably certain that every affection has a tone peculiar to itself‡.”

* We have repeatedly admitted the lowest form of typhus, amongst the ill-fed Irish, from the wretched haunts of St. Giles’s, who have been seen by some such awkward practitioner in the first stages of the fever, and have been largely bled—once, twice, or even oftener; whilst others, who have laboured under acute pneumonia, have been allowed to run on from hour to hour, and day to day, with some opening pills and a dose or two of salts! Such gentlemen frequently send their diagnosis with the patient, and, on hearing the real disease declared, are not satisfied with our treatment or our report of the case.

† Aristotle formerly treated of the subject, and states that a peculiar form of body is invariably accompanied with a peculiar disposition of the mind, and a human intellect is never found in the corporeal frame of a beast. As a lion, by his strong hair, deep voice, and large extremities, exhibits his amazing powers of body; and the hare betrays its pusillanimity by its slender extremities, soft down, and other features; so the character of a vigorous mind and that of a feeble mind, are respectively seen in the corporeal frame of man.

‡ Haller, *Elementa Physiologica*, t. v. p. 590. There is a curious and most interesting work bearing upon this subject, by Dr. Gardner, “*The Music of Nature*,” in which he elucidates the various cries, howlings, calls, and moanings, &c. of the brute creation.

Sir H. Davy observed, that dogs, when blindfolded, have the power of finding their way by the sense of smell; every lane, field, or town, has its peculiar smell.

Dr. Darwin, in his “*Zoonomia*,” remarks, that if a string of horses is noticed upon travel, you will find that the first horse points his ears forward, and the last behind him, keeping watch; but the intermediate ones, who seem not to be called upon to do this duty, appear careless and perfectly at their ease.

A dog, belonging to a change-ringer, used to accompany his master to the belfry of St. Martin’s Church, in Leicester; and upon commencing

But the physiognomy of countenance in health has been most ably treated of by Lavater, who asks, "Does the human face—that mirror of the Deity, that masterpiece of the visible creation—present no appearance of cause and effect, no relation between the external and the internal, the visible and the invisible, the cause and what it produces? Would not common sense revolt against the absurdity of maintaining that a robust man may have a perfect resemblance to one infirm, a person in full health to one dying of a consumption, a man of an ardent character to one of a sedate and gentle disposition?" He, too, was not insensible to the amazing advantages that were to be obtained from a study of the physiognomy under diseases. As to the physician, he remarks, "the physiognomy of the patient frequently instructs him better than all the verbal information he can receive. It is astonishing how far physicians have carried their sagacity in this respect." "I shall be told," says another writer, "that physiognomy is often deceitful. Yes, it is possible to counterfeit, but the apparent constraint generally betrays the imposture; and it is as easy to distinguish a natural from an assumed air, as a thought that is just from one that is brilliant. Paint laid on, however dexterously, is never the skin itself. I am not in the least staggered by the objection that a fair outside may cover a corrupted heart*."

"What would medicine be without the knowledge of symptoms, and what were symptomatical knowledge without physiognomy? and just as a man does not become a professed politician by reading Grotius and Puffendorf, so a physician does not become skilful by attending Boerhaave's lectures. Whoever thought of advancing objections against the doctrine of diversities of diseases? Woe be to that physician who, without employing physiological or pathological physiognomy—who, without consulting in every particular case his physiognomical sentiment—should tie himself down to treat every disease according to its specific class, without once thinking to modify his prescriptions in conformity to the peculiar symptoms which he observes in his patient. Rank, condition, habit, estate, dress—all concur to the modification of man; every one is a several veil spread over him. But to pierce through all these coverings into his real character—to discover in these foreign and contingent determinations, solid and fixed principles by which to settle what man really is—this appears extremely difficult, if not impossible." True, this is the sole prerogative of Him whose eye can alone search the heart and know the inward workings of its interminable labyrinths. "It is true man is acted upon by every thing around him, but he, in his turn, acts upon all these external objects; and, if he receives their impression, he also communicates his own. Hence it is that a judgment may be formed of a man's character from his dress, his house, his furniture. Nature forms us, but we transform her work, and this very metamorphosis becomes a second nature. All faces, all forms, all created beings, differ from one another, not only with respect to their dress, their genus, their species, but also with respect to their individuality."—*Lavater, by D. Hunter, vol. i. 1798.*

Moreover, who has not recognised the plaintive tones of the mateless wood-pigeon and turtle cooing for its return, whilst passing by the thick woods after sunset? Who cannot recognise the difference between the sorrowful howl of a faithful dog which has lost his master, and the fierce bark of another which has been alarmed by some stranger? Every one is familiar, too, with the common cluck, special cluck, and alarm cluck of the fostering hen. The subject is a wide and pleasant field to wander into, but I must not digress further, but would observe only, that even the position of the eye, nose, and ear in various animals, proves the truth of physiognomy as a science. Take the latter organ as an example. In timid creatures, as the sheep, the feline class, and those which are pursued, as the hare, rabbit, &c., and ruminants in general, this organ is inclined backwards towards the direction from which the sound of their enemy proceeds, whilst at the same time, being so very moveable, it may be thrown so flat upon the head and neck as not to impede the rapidity of their flight. This may be noticed in that noble creature the horse. Who has not seen the downcast ears of the jaded cab horses in London, as they pass along, kept in one constant state of terror by the gnarling driver, and the fear of the too-oft-applied lash to its emaciated sides? and who has not observed the favourite cat, seated at the fire-side, knowingly throw one ear back towards the door, to gather up the strange sounds of some approaching but unfamiliar step?

a peal of changes he would lay himself quietly down, and not attempt to stir till the bells began to "ring round," which intimated the finishing of the peal, and which he always noticed. He would then get up, shake himself, and prepare to be off from an amusement for which he had less relish than his master.—*W. Gardner's "Music of Nature."*

* Gellert's "Lessons on Morality."

THE PHYSIOGNOMY OF DISEASES.

CLASSIFICATION OF DISEASES.

HAVING thrown out a few introductory remarks, I now proceed to a closer view of the subject proposed, namely, a brief dissertation on "The Physiognomy of Diseases in their Assimilative Characters." It is a wide field, after all ; nevertheless we can particularize and portray individuals of the copper-coloured Indian race, of the black-skinned African, or of the tawny Chinese ; so we may strive to trace the lineaments of diseases generally, and of some in particular : though the species present the like features often, yet in nature, character, and end, they vary in the greatest degree. If it were not true that divers diseases are seen to present similar symptoms in one stage or other of their progress, whence would come the difficulties which start up, and which are weighed with such care and intense anxiety by the judicious and skilful medical man ? The object, therefore, of these considerations is to bring forward the assimilation or likeness—certainly not family likeness—of diseases to each other : for though they are not in any respect akin to each other but in the general name, disease, as one inhabitant of the earth is no relation to his antipodes, excepting in the general term, Man, yet the portraying of the varied lineaments of disease, which assimilate in a general character, may open the path a little wider to, and thus facilitate, the clinical student in his studies of internal diseases.

On entering into a rich flower garden, we are bewildered with profuse abundance, dazzled by countless specimens, and distracted by splendid variety ; and perhaps the bouquet, afterwards gathered, may consist of the commonest and least odoriferous productions of the crowded parterres ; so with myself, as I turn a retrograde step into the scenes of our wards, and try to cull from memory's precincts a store of rich and interesting facts to illustrate the theory I have taken up, I feel bewildered with numbers, and distracted with immense variety. It is very possible, then, that I may select the least interesting from the thousands of our physicians' cases which I have had under my care ; yet, whatever be their value as examples, they are correct as portraits, and I trust will be closely enough applied to illustrate my meaning. Thus the very mass of material which some artificers are required to build from is the chief impediment in the raising of their edifice.

So close is the knitted texture of head and body, that it is a rare occurrence to be enabled to designate a disease purely cerebral, or wholly thoracic. A man may rupture a cerebral artery from mental or bodily exertion ; he may have pneumonia from a sudden chill of his body, and so forth ; but as the disease, no matter from what origin, is concentrated in the brain, or in the lungs, and, as the chief symptoms seem to converge to that part, so we give the name of the disease to the distress in that organ, especially in the terms "apoplexy with oppressed breathing," or "pneumonia with delirium," &c. &c. This being premised, the classification of the higher diseases, according to their physiognomy in the first glance of the eye, will be readily admitted.

The whole man, indeed, sympathizes in an ache or a pain in any part of the bodily frame ; but such sympathy is far greater in some organs than in others. Man is a dependent creature ; and, speaking in deep submission to the One Eternal Great Cause, there is an unceasing mutual dependence upon the action and perfect play of every vital performer of the vast orchestra of the bodily powers :—

"Strange that a harp of thousand strings
Should last in tune so long !"

says the pious Dr. Watts. Yes ; and one little discordant tone here is enough to spoil the whole harmony.

The subject, then, seems to admit of the following arrangement as a sketch of the "Physiognomy of Diseases in their Assimilative Characters."

CLASS I.

Division I. *Cerebral Diseases in Insensibility; Countenance lethargic.*

From Apoplexy.
 Ramollissement.
 Otitis, &c.
 Tumours.
 Arachnitis.
 Injuries of the head.

Division II. *Cerebral Asphyxia in Stupor; Countenance livid.*

From Narcotic poisons.
 Coma.
 Hepatic disorders.
 Renal degeneration.
 Intoxication.

From Syncope (hæmorrhagic).
 Facial paralysis.

Division III. *Cerebral Sympathies in Irrationality; Countenance distressed.*

From Delirium tremens.
 „ in Fever.
 „ Pneumonia.
 „ Pericarditis.
 „ Enteritis.
 „ Hysteria.
 „ Chorea.
 „ Mania.
 „ Epilepsy.
 Paralysis agitans.
 „ è veneno.

CLASS II.

Division I. *Thoracic Derangement; Countenance dusky.*

From Pneumonia.
 Pleuro-Pneumonia.
 Œdema pulmonum.
 Emphysema pulmonum.
 Œdema Pleuræ (Hydrothorax).
 Asthma.
 Bronchitis.
 Endo- and Exo-Carditis.

Division II. *Thoracic Derangement; Countenance anxious.*

From Laryngitis.
 Tracheitis.

From Pleuritis.
 Empyema.
 Spasm of the diaphragm.
 Pleurodynia.

Division III. *Thoracic derangement; Countenance of peculiar hues.*

From Cardiac disease (Chronic).
 Hydrops pericardii.
 Emphysema pulmonum.
 Œdema „ (engorgement).
 Œdema Pleuræ (hydrothorax).
 Bronchitis.
 Hepato-Cardiac Dropsy.

CLASS III.

Division I. *Emaciation of Frame; Countenance of peculiar hues.*

From Malignant disease.
 Tubercular ditto.
 Cancer.
 „ of the Stomach.
 „ Uterus.
 „ Rectum.
 „ Mamma.

Division II. *Emaciation of Frame; Countenance of peculiar hues.*

From Dropsy.
 Renal disease.
 Hæmorrhage, ushering in the above disease.
 Mesenteric disease.
 Entozoa.

CLASS IV.

Division I. *Abdominal Seizures ; Countenance pinched.*

From Colic.
 Colica pictonum.
 Gall-stones.
 Urinary ditto.
 Spasm of gall-bladder.
 Gastralgia.
 Cholera.

From Constipation.
 Intus-susception.
 Hernia.
 Ascarides.
 Peritonitis.
 „ nervous.
 „ acute.

CLASS V.

Division I. *Enlargement of Organs, Glands, &c. ; Countenance, according to acute or chronic stage, harassed.*

From Goitre.
 Tonsillitis.
 Cynanche parotidea.
 Glossitis.
 Scrofula.
 Empyema.

Division II. *Enlargement of Organs, Glands, &c. ; Countenance careworn.*

From Dropsy.
 „ general.
 „ peritoneal.
 „ ovarian.

From Dropsy, mesenteric.

„ hepatic.
 „ cardiac.
 „ splenic.
 Tympanitis.
 Tumours.
 „ ovarian.
 „ uterine.
 „ cystic.
 „ hepatic.
 „ splenic.
 „ aneurismal.

Acute rheumatism.

„ synovial.
 „ fibrous.

CLASS VI.

Division I. *Vascular Diseases in Excitement ; Countenance flushed.*

From Erysipelas.
 Rubeola.
 Scarlatina.
 „ notha.
 Herpes-zostera.
 Urticaria.

From Phlebitis.

Rubeoloid fever.

Division II. *Vascular Diseases in Atony ; Countenance languid.*

From Purpura.
 Scurvy.
 Erythema nodosum, &c.

CLASS I.

Division I. *Cerebral Diseases in Insensibility ; Countenance lethargic.*

From Apoplexy.
 Ramollissement.
 Otitis, &c.

From Tumours.
 Arachnitis.
 Injuries of the head.

There is no department of semeiology in which so much valuable, precise, and oftentimes infallible information is conveyed to the mind of the experienced medical physiognomist, as in that of cerebral diseases and disturbances. The physiologist is prepared to expect such things when he surveys the human face, and finds in it four muscles, at least, peculiar to man, and which are evidently designed to convey the mute language of expression *. These muscles of expression take the lead, it may be said, in exhibiting or portraying all the varied shades, alterations, and lineaments in the physiognomy of disease. It has been truly observed, that a practitioner who has a discerning and an experienced eye in medical physiognomy will attain, in many instances, to a readiness of diagnosis and a certainty of prognosis which will astonish persons who have neglected this study.

Thus that wonderfully penetrating organ, the eye, is the grand instrument employed in primarily searching out the patient's real state, as he presents himself to the medical man. Having caught his glance, if he is able to raise the lid, you have an amazing volume of mute expression conveyed to your mind for research.

It is related of a Moslem prince, that he did but plunge his head into a vessel full of water, remain a few seconds, and come out again, when the adventures of seven years filled his mind. What are the ideas which fill our mind when we deliberately fix our eye upon the eye of another mortal, whether he be in or out of health? Even Lavater has not exhausted the subject. This only need be said, that every man is influenced by physiognomy, and that, whether he acknowledge it or not, he cannot but be so, for it is in his very nature to be thus wrought upon; and the structure of the human face, compared with that of the highest order of brutes, at once exhibits the human countenance to be endowed with powers of expression which are in vain sought for amongst the lower animal creation.

"The inner extremity of the eyebrow and angle of the mouth are most moveable, and in these we should expect to find the muscles of expression peculiar to man. This superiority of expression in man depends on the action of muscles peculiar to him, and the sole destination of which seems to be limited to this greater aptitude of expression. The systematic provision for that mode of communication, and that natural language which is to be read in the changes of the countenance, are to be found in this peculiarity of muscles. There is no emotion in the mind of man which has not its appropriate signs, and these muscles in the human face can have no other use assigned to them than to serve as the organs of this language. On the other hand, there is in the lower animals no range of expression which is not fairly referable, as a mere accessory, to the voluntary or needful actions of the animal; and this accessory expression does not appear to be, in any degree, commensurate to the variety and extent of the animal passions. These muscles indicate emotions and sympathies of which the lower animals are not susceptible; and, as they are peculiar to the human face, they may be considered as the index of mental energy in opposition to mere animal expression †."

"It is related of an eminent physician, that on approaching a patient, even whilst asleep, he would express his sentiments respecting the nature of the affection and condition of the patient, the justice of which, time and the events have verified. This circumstance proved that there was something in the general aspect and appearance of diseases on which the experienced physician forms a diagnosis, and which it would be of the greatest utility to analyze and describe ‡."

In all serious diseases which involve vital organs there are particular features depicted on the countenance, the meaning of which cannot escape the attention of an observant medical physiognomist. But the grand secret in this most valuable and too much neglected study is to simplify, to abstract, and to separate the main features, with which it is of importance to be acquainted. This is not the work of a day, nor is it to be attained by mental study, but solely by careful, persevering, and attentive observation in the wards of a large hospital, where diversity of disease and consequent varieties in physiognomy, are constantly presented to the eye of the medical student. It is of the utmost importance that the pupil should accustom himself to learn, first, to recognise the disease of the patient, before he interrogates him as to his sufferings, ailments, or the history of his illness; and he cannot accomplish this

* These four are the corrugator supercilii; the triangularis; the depressor alae nasi; the nasalis labii superioris; together with the anterior portion of the occipito-frontalis.

† From Sir Charles Bell's admirable and scientific essay on the Anatomy of Expression.

‡ "On Diagnosis," by Dr. M. Hall. 8vo. 1817.

desirable end by any other means than by the study of the physiognomy, attitude, general appearance, gait and form, &c. &c., of his patient. He should, therefore, strive to seize promptly, and to impress powerfully on his mind, the essential traits of the varied diseases which he is studying, as they are portrayed in the countenance, aspect, and carriage of the patient. Let him first run his eye over the face, and get that by heart, so to speak. Let him then endeavour to pick out, in his mind, the positive features in the face which are characteristic of positive changes in the internal organs. Thus, if a countenance is inanimate, the eye dull, the cheeks of a dusky red, the eyelid drooping, the brow overhanging; the lips dry, herpetic, and of a claret colour; the chest passive, but the abdomen active in respiration, the breathing hurried, and the skin hot and dry, the physiognomist almost instinctively decides in his own mind, before he has addressed himself to the patient, that pneumonia is raging within; whilst, on the other hand, he passes on to a farther bed and views a pale face, an anxious and distressed eye, a puffy blanched lid, alae nasi actively engaged in respiration, the angles of the mouth slightly drawn down, the lips separated, the cheeks somewhat bloated and greasy, the jugulars distended, the carotids oscillating, the præcordial region full and more rounded than its opposite, he, moreover, recognises acute rheumatism in the smaller joints, and instantly his mind fastens upon the pericardium as the seat of a mortal disease. His ear further instructs him in both instances, by developing to his mind some of the sounds peculiar to active pneumonia, or to inflammation of the heart and its investing membrane. Now, it may be affirmed that, whenever the principal features of a disease are thus portrayed in the countenance, the accessory traits of the disease will be equally as significant and striking. It would be superfluous almost to add, that, when auscultation is brought to bear upon the foregoing and other diseases of the chest, the physician is as certain of the actual morbid changes, and of the varied stages of those changes, that are going on in his patient as if they were laid out before his eye in the dead body; and assuredly he must be better acquainted with the phenomena of those morbid processes than he can be of those changes in organs which he can neither see, nor feel, nor hear.

But to return to the expression of the eye under disease in some vital organ. Who can delineate the variations, the shadows, the languor, the lethargy, the imploring look for help, the impatience, the terror, the anxiety, the havoc which disease is making, and the stamp of which is pictured in the eye, its brows, and its lid? The intimate communications of the fifth pair and seventh, or nerve of expression, with the sympathetic, through the medium of the ciliary, Otitic, and Meckel's ganglions, would be alone sufficient to lead us to expect that this organ of sense should readily exhibit in its altered appearances, the derangement of internal and vital organs. This expressive, though silent organ, may be bright or dull, heavy or clear, half shut or unnaturally opened, sunken or protruded, fixed or oscillating, straight or distorted, staring or twinkling, fiery or lethargic, anxious or distressed; it may be watery or dry, of a pale blue, or its white turned yellow, or its white blood supplanted with red blood. Its vibrations and changes often cannot be numbered, they are so evanescent and so sudden. The pupils may be minutely contracted or widely dilated; insensible to, or intolerant of, light; oscillating or otherwise; unequal in their sizes, and deflected from their clearness. Then we view the brow, that wonderful appendage of expression in a human face: this, too, has its silent language; it may be overhanging, corrugated, raised, or depressed*, whilst the lid exhibits its alternations of puffiness or hollowness, of smoothness or unevenness, of darkness or paleness, of sallow or brown, of white or purple. Lines intersect the region, and the varied tints are perpetually giving new colour, new features, new expression, by their shadows. Such is the eye, with its brow and lid. Here, then, is the region we enter on. Let the pencil which can best portray take up what the keenest eye can give, and yet is the outline but feeble. So much for mortal power.

Nor is the mouth inferior in expression to the eye. As the greatest portion of the beauty of a face resides in the mouth, so is this department of physiognomy most significant in nearly all those internal diseases which fall upon organs essential to life. "If the angle of the mouth is depressed, it gives an air of despondence and languor

* "In smooth, unruffled countenances, the four muscles peculiar to the human face are poised and counteract each other. In drunkenness, which often produces a temporary paralysis, the eyebrows are sometimes unequally elevated. It is an unusual exertion of the frontal muscle to counteract the heaviness of the eyelids, which produces the elevation of the eyebrows. This web of muscular fibres, which is expanded on the forehead in man, is reflected off from the skull to the ear in lower animals."—Sir C. Bell's "*Anatomy of Expression*," 4to.

to the countenance. When the corrugator supercillii co-operates with it, there is mingled in the expression something of pain. If the frontal muscle joins its operation, an acute turn upwards is given to the inner part of the eyebrow, very different from the effect of the general action of the frontal muscle, and decidedly characteristic of an aguish, debilitating pain, or of discontent, according to the prevailing cast of the rest of the countenance*.

Every passion of the human frame runs throughout the lips to tell its tale. We may call the mouth eloquent in its silence, and speaking, though it be shut. Like the bursting bud, it parts for a smile; it expands for laughter; contracts in rage; curls for disdain; and opens for fright. In its every movement it works with the nostril. Here is union, sympathy, and help. Both assist in producing lineage, and both stamp a joint meaning and cause. In all the depressing influences which act upon the mind, the eyebrow, eyelid, nostril, and angle of the mouth, are depressed, whilst these parts of the face are raised in the emotions of joy, laughter, &c. &c. Who cannot read a harassed state of mind in the upward inversion of the eyebrow, with a depression of the angle of the mouth? Here, then, is another region not so vast as that above, but full of interest, grandeur, variety, and use, to him who studies the beauty, the deformities, the virtues or the vices, the health or the diseases, of his fellow-man.

We may now make an attempt to catch some of the points just hinted at, and will enter upon the consideration of the disease called

APOPLEXY.

Apoplexy, or, in other words, sanguineous effusion into or upon the substance of the brain, may be the result of a blow, but more frequently it is the effect of a ruptured bloodvessel in the cerebral arteries, and occurs usually after forty years of age. Allied to this, there is also ramollissement, or softening, of some portion of the brain; and this ordinarily occurs in the upper or inferior surfaces of the brain, but rarely so in its substance. It is a disease, also, of advanced life. With the former disease there is seldom hemiplegia: if the blood has escaped into the lateral ventricles, crura cerebri, or pons Varolii, insensibility is complete, and death is speedy. On the other hand, if the blood has only escaped into one corpus striatum, or thalamus opticus, or one of the walls of the lateral ventricles, hemiplegia is then an early evidence of such an effusion; insensibility is not quite so complete as in the former case, and death is more protracted.

In ramollissement, however, the paralysis, though present, is not an early indication of this disease: consciousness is not altogether gone, and the sufferer lingers on to a much more protracted stage than in the former two states of cerebral lesion.

The following instances exemplify this complete and partial insensibility in apoplexy.

Susan Cole, forty-five, a short bulky woman, brought in by the police, senseless. She was found, an hour before her admission, on the pavement, in the dark. No account could be obtained of her previous condition. No one saw her fall, or heard her speak. Her state was as follows:—Countenance tranquil, just like a person in a deep sleep; veins of the neck not turgid; mouth open; tongue protruded and swollen; eyes closed, pupils reduced to a small pin's head in size; breathing natural. A brandy bottle was found on her, empty. Pulse 86 and full. We had a suspicion that she had taken opium in some spirituous liquid, and therefore washed out the stomach, with some difficulty, by the stomach-pump, but no traces of any narcotic fluid could be detected. She felt when pinched. There was no paralysis. A drop of croton oil was placed on the tongue, the head was shaved and covered with a blister. She was bled to a small amount, as the vein would yield but little. A turpentine enema was administered; the bladder emptied of a quart of high-coloured urine. Pulse became slower and feebler, and she lingered fifteen hours from the attack.

Examination Twenty-four Hours after Death.—Chest conoid; heart enlarged; fluid blood in both its ventricles: left much hypertrophied; capacity natural; a few atheromatous deposits on the aorta, above the sigmoid valves. Stomach healthy, but mucous lining softish. *Head.*—Turgescence of all the cerebral veins; lateral ventricles filled with a sero-sanguineous fluid, and a clot of blood floating in it. On raising the fornix the walls of the third and fourth

* Sir C. Bell, *oper. cit*

ventricles were lacerated, laid open, and filled with blood, both fluid and coagulated, which ran as far as the extremity of the fourth ventricle; the adjacent parts were softened; no appearance of adhesion of the coagula, there was a small spot of blood in one thalamus opticus; corpora striata healthy; sinuses of the dura mater gorged with blood.

An instance of sanguineous effusion without the ventricle occurred recently. Mary Bignon, aged sixty-eight, a tall and powerful woman, was found in bed unusually late on the morning of May 9, and, on being roused, complained of headache; was rational in her answers; but, as she continued to sleep through the following day, she was brought here by her relatives on the morning of the 11th. Her symptoms on admission were as follows:—Countenance dusky, and void of expression; eyelids closed; no distortion of the features; answers questions readily when spoken to in a loud and sharp tone of voice, but relapses into a lethargic sleep; hemiplegia of the left side; pupils sluggish to the light, unequal in their size; pulse 84, small. She was actively treated by repeated doses of calomel and colocynth, and purgative salines*. The head was shaved, and the course of the longitudinal sinus repeatedly blistered; cupping behind the right ear; turpentine enemata administered; and in the course of six days she was so far rallied as to promise to do well, apparently. Her back now sloughed from incontinence of urine, which supervened upon this temporary improvement, and she gradually sunk without any additional comatose symptoms, and died on the 23rd, exactly a fortnight after the attack.

Autopsy Eighteen Hours after Death.—The right hemisphere of the brain was flattened, the sulci small; there was a cavity capable of containing four or five ounces of fluid outside the right ventricle, the internal wall of which was formed by the external wall of the right lateral ventricle; this cavity was full of semi-coagulated blood; much of the coagula adhered to the walls of this cavity by firm bands of semi-organized substance; the lateral ventricles contained a little clear serum; there was only slight disease of the arterial circle of Willis. All the other organs of the body were tolerably healthy, considering the age of the patient.

RAMOLLISSEMENT.

The following example of Ramollissement at an early age elucidates the features of this cerebral lesion very well:—

James Chaloner, twenty-six, labourer, admitted February 17, with the following symptoms:—Countenance pale; a staring, vacant, and rather inanimate eye; features pinched; knitted brows; slight conjunctivitis of the *left* eye; on walking into the room it was observed that he dragged the right leg after him; when interrogated, he spoke in a slow manner, and with few words; does not feel when pinched in the right leg. Acknowledges that he has pain over the *right* eye; some cough and expectoration; pulse 96, full.

It was stated that he had suffered from a cough for three weeks past, which had brought on pain in the head. A week ago, on attempting to rise from his chair, he found he could not use the right leg; since which he has kept his bed.

Auscultation.—Dulness on percussion, and feeble respiration under both clavicles, but respiratory murmur healthy, as the ear descends to the lower lobes. C. c. ad 3xvj. nuchæ; hydr. c. cret. x., n. et m. Emp. canth. capiti. raso.

The following note was made on the 21st. :—

"Hemiplegia on the right side complete; lies in a drowsy, half-comatose state; acute conjunctivitis of the left eye, with purulent discharge; countenance quite inanimate, and more like a person in a narcotized sleep; irides act with a strong light; pulse 70, with some power; urine dribbles from him, ammoniacal; stomach rejects every thing: respirations natural; sloughing of the nates; bowels confined two days. V. s. ad 3xvj. Emp. cantharidis rep. sen. co., ʒjss.; c. et tr. jalap., ʒj.; H. dec. aloes co., ʒss. Enema tereb. vespere."

22nd. The serum of the blood was greenish, the crassamentum much buffed and cupped. Is now sensible, so as to put out his tongue. Pulse rose in frequency, but sunk in power after the bleeding. He rapidly sunk, and died on the morning of the 23rd, profusely sweating†.

* This patient's body emitted the strong smell of mice so repeatedly noticed in cerebral diseases.

† The yawning, ammoniacal sweating, and the cuddling of the head under the clothes, with the knees drawn up, are some of those fatal harbingers which we notice in bruises of the brain from lesions, whether traumatic or secondary in their character, and they were present in this instance.

Post-mortem Examination Twenty-four Hours after Death.—Head.—On stripping off the dura mater from the left hemisphere, a mass of small points, supposed to be, from their resemblance, the Pacchionian glands, was exposed over the edge and middle of this portion of the brain. On more minute inspection, however, this appearance turned out to be a series of small tubercles, which were beautifully seen when the arachnoid was carefully stripped off. They were opaque; and beneath them, and in their immediate neighbourhood, there was a debris or softening of the grey matter, but which was very vascular. The medullary substance did not appear to have suffered. In various parts, and, around this spot especially, there were numerous points of tubercular deposition upon the arachnoid, or pia mater, and they were in various stages of softening; they had produced corresponding points of ulceration in the cineritious substance. Those that were softer than others had evidently involved to a farther extent the cerebral matter beneath it. The arachnoid in the median fissure, where it lies in contact with the falx, appeared of a straw colour, presenting the appearance of purulent matter beneath its surface; but this proved to be a series of the same tuberculous points, which were studded about this portion of the right hemisphere. In this half they had no where involved the cerebral substance. The general structure of the brain was otherwise very healthy and firm. *Chest.*—Lungs studded with tubercles, some of them being very advanced in the suppurative stage; they were general in both lungs, and the upper lobes were solid from the aggregation of several masses. The heart was natural in size, but the right ventricle composed more than one half of the organ; the left ventricle was twice its natural thickness, but its capacity diminished. There was found a scrofulous tubercle in the posterior part of the right spermatic chord, and there was ommental hernia on this side.

The next instance of ramollissement cerebri that I would add is unlike the preceding, inasmuch as it is not one arising from morbid deposition on the cerebral surface, but rather the result of an undue nutrition of the brain, in consequence of disease of the arterial system, which latter change was the immediate cause of death.

Eliza Robinson, aged sixty-five, admitted on February 26th. Countenance dull and stupid; some expression of suffering in the knitted brows and slightly pinched features; iris of left eye more dilated than the right; answers incoherently; and it is evident that her statements must be taken with some caution. However, she owns that she has pain over the occiput, and numbness of the right arm and leg: can only lie on the right side for palpitation of the heart; deglutition impaired; the first sound of the heart is diminished, but its impulse is increased.

States that she has been more or less subject to headache for three weeks past; but that three days ago, whilst at breakfast, was attacked with loss of consciousness, and on recovery found herself in bed with the above symptoms.

March 6th. Was going on favourably; but this evening at eleven was suddenly attacked with convulsions and coma, and remained insensible until the 9th, when she died.

Examination Twenty-one Hours after Death.—Head.—Veins turgid; on the upper part of each hemisphere, and especially on the right, there was distinct extravasation of blood beneath the arachnoid, from the vessels of the pia mater. This ecchymosis was of a purple colour, but, on exposure to the air, became, in half-an-hour, of a bright red; ventricles full of serum; hydatiform condition of the plexus choroides; the lower portions of the cerebellum were so soft that they broke down in the mere attempt to raise it: this pulpy substance was minutely studded with red points, and gave the whole structure the exact appearance of a mélange of mashed raspberries and cream.

Thorax.—The pericardium, to which externally was appended much fat, was filled with a firm coagulum of blood, which enveloped the whole heart, and slightly adhered to the auricles; it was taken out in one mass, of a bag-like form, and perfectly moulded. There was a small coagulum protruded into the layers of the pericardium, through a slit-like rent of the serous membrane, just at its point of reflection. It was supposed that the blood found its way from the aorta through this opening. This proved not to be the case. The walls of the left ventricle were thicker than natural, and on the edge of the mitral valve were a few hard, short excrescences. The aorta throughout was full of opaque, thickened, yellowish spots, some of them were distinctly bony; it was dilated in its coats. On its upper or convex part, and just before the primary branches are given off, there was a transverse crack or rent, upwards of one inch long, with clean edges, like a cut produced by a sharp knife. Rather lower down (and perhaps originally before the parts were pressed out of their natural position, *just opposite*) was seen the opening into the pericardium, as just mentioned. Between the two inner coats of the aorta and its outer or cellular coat, there was a

large coagulum of blood; the small projecting clot formed a portion of a small coagulum lying between the serous and fibrous coats of the pericardium, and seemed to have got thither from the bag of the pericardium.

Before I proceed to the consideration of the other diseases which are placed in the first division of this class, it may be of great practical utility just to take a retrospective glance of the foregoing cases, and point out the physiognomical character of each, so that the assimilation of features may be traced in the respective diseases now under notice.

It is often observed that a practitioner may arrive at a correct diagnosis of some obscure disease by first ascertaining what the malady in question really is *not*, and by this means, the mind is led on to an acquaintance with what the actual disease *really is*. Now, in the preceding group of cases of cerebral lesion, we may notice the following prominent characters.

In the first, there is complete insensibility, closed eyes, contracted pupils, and a slow pulse. May these not arise from intoxication? The pulse will not allow us to draw this conclusion. May it not proceed from narcotism by opium? This is possible, but the unaltered state of the symptoms after the exhibition of the stomach-pump, precludes us from drawing this inference. What other conclusion can we, then, come to, from the above symptoms? I am acquainted with no other means which are capable of producing the above features to a disease, but poison by urea, and sanguineous effusion into the central portions of the brain, thereby causing pressure upon both thalami. The circumstantial evidence tended to form in our minds the latter diagnosis.

In the second, insensibility is not quite perfect, but the eyes are closed; there is no distortion of the features, but there is hemiplegia, and unequal irides. Sudden effusion into one cerebral hemisphere must, therefore, be the cause of these aggregated symptoms.

In the third, the eyes are staring and vacant, and the brows are knitted, which is a strong presumptive evidence that the cerebral disease is not recent, nor from any sudden lesion of this organ, otherwise the lids, as in the former two, would be closed over the eyes.

On the fourth, somewhat similar observations might be made, as on the third case, comparing them both with the two former ones. In fact, we might lay down the following axiom in the study of pathological physiognomy, that whenever a sudden lesion has been offered to the brain, the eyes are closed, and the patient is insensible; whereas, if the same organ is the seat of a slow yet progressive disease, the eyes are half closed, or wide open, and there is some distortion of the features, irregularity in the pupils, and dulness in the whole countenance, with palsy of the body.

Complete insensibility does not follow the presence of effused blood into the walls of one lateral ventricle, for the second patient could answer to our interrogations, but she was hemiplegic; recovery was partially established; and, therefore, we may infer, that where the symptoms enable us to form a correct diagnosis as to the immediate seat of the effusion, we can, at the same time, give some opinion as to the probable results of the case.

But the third instance differs widely from the two former ones. The countenance denoted that a slow, wasting disease had already made severe ravages upon the constitution. There was some power of expressing his feelings still residing in the muscles of the face: he knitted his brows, and his features were pinched. The conjunctivitis, hemiplegia, and, above all, the unequivocal evidences, which we obtained by auscultation, of tubercular deposition in the upper lobes of both lungs, left no doubt upon the mind that the brain was the seat of a disease similar in its character to the one which was making its slow devastations in the chest, namely, tubercular deposition and softening. The greenish serum, it is asserted, is another test of the presence of tubercles in the system.

If we review the fourth case, one of simple ramollissement, accompanied with ruptured aorta, we observe that the cerebral symptoms had been creeping on, in an aged woman, for some weeks before loss of consciousness ensued. The occipital pain, the numbness of the arm and leg, the impaired deglutition, the contraction in the right iris, but, especially, the influence which this slow disorder was capable of producing on the features of the face, would lead the observant and discriminating physiognomist to conjecture the disease which terminated her life. The altered condition of the rhythm of the heart greatly tended to favour the opinion that the cerebral disease was ramollissement consequent upon impaired nutrition and diseased bloodvessels; and the difficulty in deglutition led the mind to suspect that this morbid process was going on at the base, and *not* on the superficies, of the brain.

OTITIS.

When inflammation falls upon the internal ear, in consequence of any slow disease which is progressing in the petrous portion of the temporal bone, the symptoms of such a disease are most insidious, deceptive, and fatal. There is no part of the bony structure of man that is so dense as this portion of the skull, and yet there is no part of the osseous system that undergoes such fatal changes in a scrofulous constitution as the above-mentioned bone. If a patient complains of lassitude, mental and bodily depression, if he presents a dull and rather hypochondriacal countenance, and if, moreover, he has had a discharge from one ear, and it has suddenly ceased, and he has become deaf, whether he complains or not of any head symptoms, yet these are alone sufficiently serious to awaken alarm in the mind of an attentive and observing practitioner. Let the inexperienced student beware of treating such cases with levity. Some time since a young gentleman of the legal profession was "out of sorts," as his friend, a relative of mine, expressed it, but did not feel ill enough to send for medical aid. My friend insisted on his having advice, or else on going to his chambers. He preferred the former, when an eminent surgeon of the borough hospitals was called in; but, as his patient made no complaint, he told my friend that he thought he was "hipped," and ought to be roused and be made to go to his professional duties. They tried that advice, but it was all to no purpose, the patient declared he could do nothing but lie upon the sofa and read. Three or four days after this occurrence, my friend, who lodged with him, thought he noticed a slight aberration of mind as he was conversing, and, becoming alarmed, he requested the surgeon to call in a physician, which was accordingly done. The latter gentleman made known his suspicions freely to his friend, requesting that he would communicate with the patient's father, stating at the same time that he feared there was slow disease going on in the brain. The next day the gentleman complained of earache, and in twenty-four hours more was furiously delirious, and lingered for a few more hours, when death terminated the scene.

There was arachnitis of one hemisphere of the brain. The petrous portion of the temporal bone was pulpy; the mastoid cells and cavity of the tympanum were filled with purulent matter.

Another instance occurred here, when the unusually marked features of the disease could leave no doubt as to the diagnosis. However, by mild forms of mercurial treatment, depletion from the mastoid cells by leeching, &c., he ultimately recovered, and my case-book reports him to have been discharged convalescent from the hospital.

Destruction of the ossicula auditus, and softening of the petrous portion; ulceration of the tympanum, and purulent secretion from the whole mastoidean cells, can exist without any other striking symptoms than those already enumerated. This has been repeatedly witnessed, as the following among the many instances will show:—

William Clements, aged twenty-one, painter, was admitted Sept. 29th, with the following symptoms:—Somewhat emaciated; countenance pale and thin; features shrunk, expressive of anguish; eyes dull; deaf in the right ear, suffers no pain in it, but there is pain over the frontal and temporal bones of this side; no vertigo nor delirium. States that he has had earache accompanied with discharge.

Six weeks ago he got wet through; shivering, followed by fever and pain in the head, supervened. The former ceased, but the headache recurred from time to time ever since. The headache has been intermittent, though not observing any stated periods of recurrence, until six days ago, since which time it has been constant. He says that through life he has been subject to earache on the right side, which has been attended with discharge and relief to the pain. C. c. ad 3vij. temp. dex. et ol. ricini 3 ss. statim.

Oct. 2nd. Pain relieved by the cupping, but through yesterday he lay quiet, occasionally starting up and shrieking out with pain; towards evening on this day he became insensible, and the extremities cold. In the course of an hour he rallied out of this collapse, but remained in a state of stupor, though he was easily roused, and complained of a sense of weight over the right side of the head; drowsy, and impatient of being spoken to; pulse 96, hardish. Pil. hydr., gr. v., ter. rep. C. c. ad 3vij.

5th. Coma more complete; iris of the right eye insensible to light; increased sensibility of that side of the face; no paralysis; slight conjunctivitis. In the course of the following day his breathing became stertorous; insensibility was complete, and he sunk rapidly, and died the same evening.

Autopsy Twelve Hours after Death.—Head.—No notable vascularity of the membranes; no effusion beneath them; firm adhesion of the dura mater to the petrous portion of the right temporal bone, in that small space external to the ridge beneath which are the semicircular canals. It was easily detached from the bone, and was found to be almost cartilaginous in consistence. The bone at this part was rough and partially destroyed; the brain, opposite this adherent portion of membrane, was soft and pulpy to the extent of two inches. An incision was made into this softened substance, when an ounce of greenish pus flowed out. This matter was contained in three distinct cells, of which the parietes were complete, formed of a hardened mass of cerebral substance, and possessing a red, vascular, and flocculent internal lining. Beyond these hard margins the medullary matter was of a dusky yellow colour, and very pulpy. The largest of the three abscesses extended to the base of the lateral ventricle over its posterior horn. These latter cavities were full of clear serum. On carefully examining the internal ear a small abscess was found just above the mastoid cells which communicated with the tympanum, and had destroyed the small bones and membrana tympani. There was no communication whatever between this abscess and the cavity of the cranium.

MALIGNANT DISEASE OF THE BRAIN, OR TUMOURS

within the cranium, give rise to a train of symptoms which are strongly assimilated to those organic lesions that have been already enumerated. However opposite these morbid changes may be, and however they may differ as to their origin and their progress, yet the attentive physiognomist cannot fail to discern a remarkable assimilation of features in the broad outlines of them all. It requires a practised eye to discriminate these likenesses, but with the exercise of some tact and judgment they soon become capable of distinction, and the tutored mind seizes on their varieties, but general resemblance, before it allows the statements and complaints of the patient to carry it away to an indistinct combination of less intelligible proofs.

In cerebral diseases, beyond all others, the physiognomy is most instructive. The student in this valuable branch of medical study should accustom himself to search, fix, and class some of the external signs of internal diseases, as portrayed in the face; as in the brow, forehead, the eyelids, the cheeks, the nostrils, the lips, and, above all, the expression of that index of the mind, the eye.

The following instance of FUNGUS MEDULLARIS of the brain will elucidate some of the foregoing observations:—The facial paralysis did not depend upon simple thickening or inflammation of the neurilemma of the nerves of expression and motion, as is the case in ordinary instances of twisted face, but other grave and more serious features were recognisable in the countenance, which clearly denoted destructive mischief in the substance of the brain itself.

Samuel Dovey, fifty-seven, tailor, admitted Feb. 26th. A tall, athletic man. Drags his left leg after him; left arm in a state of semiflexion, and powerless; countenance singularly distorted from paralysis of those parts supplied by the portio dura on the left side; deaf in the right ear; pupils natural, but does not see distinctly with either eye; overhanging eyebrows; general aspect of the countenance dull and distressed. Acknowledges that he has pain over the right eye, which comes on worse in the evening, and affects the whole head, so that he is obliged to hold it with both hands in order to obtain some relief; the deafness, he thinks, came on from the severity of the pain. Ten days ago he found out the paralysis of the face by not being able to spit; he never had a fit, but says his memory is not so good as formerly. The hemiplegic symptoms are of a few days' duration only.

R. Hydr. chlor., ij.; opii $\frac{1}{2}$ bis. die.; C. c. ad $\frac{3}{4}$ viij. nuchæ. Emp. canth. ponè aures.

From his admission to his death, the following note was made of his heart's action:—"Impulse increased; the systole attended with a sharp noise, like the sound produced by passing the finger briskly down silk or bombazine, most audible at the base of the heart; respiratory murmur healthy."

From this period to his death, which took place on the 29th of March, he had several fits of coma and convulsions, for which he was bled to 10 oz., and on another occasion the cupping was repeated. The last fit occurred on the 16th, when he was found breathing stertorously, lips flapping to and fro in each respiration; face flushed and turgid; head hot; paralysis unaltered; gums sore; perfect insensibility; evacuations pass involuntarily; sloughing

of the nates; heart beating forcibly; temporal arteries distended and firm; one of the latter was opened; and 3xvj. of blood removed, which reduced the power of the pulse and turgidity of the countenance, but did not alter the other symptoms. He roused somewhat in the course of the following day, but again became drowsy, and gradually sunk; the nates had sloughed to a great extent.

Examination Twelve Hours after Death.—*Chest.*—No fluid in the pleura; serum, tinged with blood, resembling porter, in the pericardium; heart large and loaded with fat; a deposit, more fat, on the tricuspid valve; left ventricle hypertrophied; mitral and semilunar valves irregularly thickened. Many atheromatous deposits along the aorta, with puckering of the membrane. Just within the ventricle, and half an inch from the commencement of the aorta, the inner membrane was white, opaque, and along the middle of this space, parallel with the circumference of the aorta, and in the same line with the attachment of the mitral valve, ran a prominent line or ridge, whiter than any other part, and having the feel of a sharp cord. On closing the ventricle, it was manifest that at this part of the chamber a real stricture had been constituted*. *Head.*—Sulci between the convolutions dry and flat, and not very apparent. Substance of the brain firm, and marked by several red puncta. Left lateral ventricle enormously distended with clear serum, and of great size even when emptied; on the other side the walls of the ventricle were forced nearly into apposition by the pressure of a tumour, which occupied a large portion of the right hemisphere, the central part of the tumour being rather posterior to the centre of the hemisphere. The posterior portion of the tumour was of a red colour, and soft; centrally it had a light orange tint, and a spongy cellular structure; the anterior part was hard, homogeneous, and pearly in appearance. The tumour was about three inches in length and nearly two in breadth, and of considerable thickness. In a subsequent section an apoplectic clot, as big as a hazelnut, was found at the under part of this growth†. The plexus choroides was hard, irregular, and enlarged at its posterior part or extremity. The arteries at the base were covered in several parts with white calcareous deposits, and they were dilated at this spot. The portio dura and mollis, where they emerge on the right side as distinct chords, were as if adherent to each other, and the former nerve was both larger and harder than its opposite. So also it was found where it entered the petrous portion of the temporal bone. A projecting nipple-like portion of the brain existed immediately above the point of emergence of the seventh pair of nerves, and apparently had caused pressure on that part. The portio mollis was softened and nearly invisible at the first glance. This projection arose, seemingly only, from a part of the brain that was pushed over by the tumour. The sixth nerve on the diseased side was *larger* than the opposite one.

In the instance of a young female, of strumous diathesis, and who laboured under symptoms of cerebral disease, precisely analogous to the foregoing case, perfect recovery followed the inunction of the tartar emetic ointment on the shaved scalp, over the surface of the seat of the disease. The patient was rapidly sinking, with loss of consciousness, hemiplegia, deafness, involuntary action of the sphincters, when our late house-surgeon, Mr. R. Pyper, now in the 11th Hussars, visited the ward, and suggested the immediate and persevering use of the above remedy; and the result in the course of one week was most gratifying and decisive. She left the hospital convalescent, and returned six months afterwards to pay a visit to the day nurse of the ward, who remarked that she looked quite well, only that she thought she was "rather silly."

The train of symptoms just related may also arise from any unnatural growth within the skull, but the immediate effect of such a growth may be postponed for a longer or for a shorter period after such a morbid substance has sprung up; and it is one of those extraordinary paradoxes in cerebral pathology which cannot be satisfactorily explained. For example, an individual may suffer from a mortal disease within the brain, and yet present but faint traces of symptoms of such a disease, when a sudden and an alarming attack of coma ushers itself in, and carries the patient off in a few hours. Whilst, on the other hand, the slightest blow offered to the skull has been known to

* Could this give rise to the peculiar sound of the ventricular action? or did this abnormal sound arise from any altered action of the mitral valve, with the insertion of which the line of stricture was continuous?

† It is a matter of question whether this was the result of the destruction of some small vessel in the progress of the disease, and whether it occurred on the 16th ultimo, when the symptoms became so suddenly aggravated.

produce concussion and death in less than twenty-four hours, when no post-mortem lesion could be traced in the cerebral substance. The following instance of aneurism will exemplify this observation.

ANEURISM OF THE INTERNAL CAROTID ARTERY. PARALYSIS OF THE DISEASED SIDE OF THE BODY.

David Pedhurst, gilder, aged thirty-five, May 19th. Countenance pale and heavy; deafness; constant drowsiness during the day; pulse 70, with power; tongue furred, but moist. Complains of great pain in the head, particularly at the left side; and shooting down the spine. Bowels torpid.

Ill four months with pain in the head, occasional giddiness, and dreaming at night. Eight days ago was walking in the street, when a sudden dimness of vision seized him, and he fell insensible; after a short time his senses returned, but he observed a partial loss of use in the left side: its use has gradually returned. The deafness, which he has had from a child, has increased since the attack; has had a discharge from both ears for many years, but it has stopped within the last week. H. gent. c. sen. ter.; calom. gr. ij. n. et m.

June 1st. Frequent vomiting and sinking during yesterday. Has been in a comatose state for the last two or three days; deafness increased; evacuations passed involuntarily. Died in the course of this night without apparent pain.

Examination Twelve Hours after Death.—*Brain.*—Its membranes and external surface were very dry—the latter smooth, with the convolutions flattened; there was no excess of vascularity. The substance was exceedingly firm, so as not to be torn asunder; at the front part of the longitudinal fissure the hemispheres adhered one to the other, just above the corpus callosum; the medullary matter was here softer than elsewhere; lateral ventricles distended with bloody serum; both communicated; choroid plexus was pale; upon the floor of the left lateral ventricle were small coagula of blood; and the left corpus striatum was quite soft and pulpy. An incision through this passed to the centre of a large coagulum; the brain around it was yellow and soft; on removing the blood, an aneurismal sack, of the size of a hazel-nut, was discovered at the internal carotid, just after it passed through the carotid canal; it subsequently proved to be just at the commencement of the middle cerebral artery; the petrous portion of the temporal bone, just over the tympanum, was softened; the internal surface of the tympanum rough, and denuded of its periosteum; and membrana tympani gone; kidneys each had several small cysts filled with a yellow, thick, gelatinous fluid; enlargement and calcareous deposits in the mesenteric glands; other organs healthy. A small portion of the ilium was given off from the continuous intestine, and inserted at the front part of the pelvis, between the bladder and rectum.

It appears from his history, that, about the time of the sudden increase of his pre-existing symptoms, the discharge from the ears stopped, and did not again recur; whence it is probable that this discharge was a salutary effort of nature to ward off a more fatal disease, or, at any rate, to protract its fatal termination.

It is surprising the extent to which the brain may be the seat of progressing disease on the one hand, or of injuries, from causes external to it, on the other, without any alteration in the faculties of the mind. During the last twenty hours that I write, a man has been brought here having compound fracture of the skull from a blow by a poker; he was trephined by Mr. Arnott, but has been, and still is, perfectly rational, calm, and anxiously inquiring when he may leave the hospital to get on with a job he has in hand; whilst the following instance of aneurism of the basilar artery, and consequent pressure on the most vital portions of the brain, the pons Varolii, and medulla oblongata, tend to show that the symptoms of injuries of the skull and brain are by no means commensurate with the extent of those injuries*. The stomach may fill with blood before vomiting and syncope ensue; the uterus, too,

* As a further proof of this remark it may be added, that the servant of the Duke of Portland was brought here, having just previously been thrown by a spirited horse, and was kicked by the animal in his fall. The whole parietal bone was carried away; the brain was extensively bruised, and lying about the hair, &c.; indeed, this side of the skull was a frightful mass of contusion, laceration, and fracture. The man, nevertheless, was perfectly sensible, and insisted on going to the water-closet from the ward, alone; and was very dissatisfied that he should be confined to his bed. However, this rationality did not last more than two days, when coma, and ultimately death, ensued.

On the other hand, there was an instance of a boy who quarrelled with a strange lad whilst playing at cricket, when the latter seized the wicket and

will often contain pints of blood before contraction of the organ takes place to expel its contents; so, likewise, the brain appears to be capable of bearing with the existence of a tumour, or with severe injury, for a longer or shorter period before it manifests any decided train of symptoms indicative of the lesion.

J. Pettiwether, apparently forty years of age, was brought into the hospital at eleven A.M., July 16th. He is a short, thick-necked, gross man, weighing, perhaps, sixteen stone. Lies perfectly senseless, and was so found in the street half an hour before. He had been working during the week, and was in the enjoyment of tolerable health—that is to say, he made no complaint of sickness. Countenance bloated; eyes closed; pupils contracted; breathing laboured; no apparent paralysis; pulse full and hard. He was bled to twenty ounces, and cupped to the same amount on the nape of the neck, but he rapidly sunk, and died in seven hours, unable to swallow any liquid. On examining the brain it was found gorged with blood, and its ventricles with clear serum. There was no rupture of a bloodvessel, nor extravasation of blood in any part; but the pons Varolii, and a portion of the medulla oblongata, were hidden from view by a tumour the size of an ordinary walnut, which proved to be an aneurismal pouch of the basilar artery, full of semi-coagulated blood. The heart was flabby and large, thin in its walls, but dilated in its cavities.

Another instance of the same disease has recently occurred here. Mt. Croker, aged fifty-two, was brought in senseless, having retired to bed, complaining of headache, and slight weakness of the right side, where she was found senseless the following morning. She died apoplectic in eighteen hours. The left lateral ventricle was full of blood, which had found its way from a rupture of an aneurism of the left carotid artery, close to the foramen opticum, as large as a walnut.

ARACHNITIS.

The great difficulty which the most eminent surgeons encounter in the formation of a just diagnosis in injuries of the head, and the obscurity attending those fatal symptoms which ordinarily follow such lesions, are chiefly witnessed in large hospitals. The above disease is rarely met with, as an idiopathic affection, in these institutions; and I shall, therefore seize the present opportunity of tracing a marked instance of traumatic arachnitis, which ended fatally two days ago, and the *post-mortem* examination of which took place yesterday.

The case was the following: Jas. Meaders, aged fifty-one, admitted May 8th, under Mr. Shaw, with a slight wound over the *left* eyebrow, with the frontal bone denuded, and fractured radius, near its humeral extremity, of the right arm. Two days after his admission, he had a sharp attack of erysipelas, extending over the head, face, and neck, which, however, passed away, and he was apparently convalescent from it in ten days. On the expiration of a fortnight from this period, Mr. Shaw observed that he was slightly deaf in the right ear; that there was, moreover, partial hemiplegia on the same side, and that the two halves of the face did not quite correspond in symmetry. As the erysipelas had chiefly occupied the right side of the head and face, it was supposed that this slight distortion did not arise wholly from cerebral disease. However, the house-surgeon, Mr. Dixon, hastily summoned me to see him on the 8th of June, in consequence of a severe fit in which he was then struggling. The face, owing to the former erysipelatous inflammation, was blackened with turgidity, and presented the aspect of a man who had been strangled or drowned. The countenance was a ghastly figure, both in appearance and in its features; there were hemiplegic twitchings and convulsive throes of the right half of the body. There had been increased deafness and impeded deglutition for two or three days prior to this fit. The tongue was not protruded with ease, and he could not, or would not, answer to our questions so readily or so easily as he had done. These symptoms led me to suppose that either the cerebellum, or pons Varolii, or medulla oblongata, was suffering from some injury which it had received in the *contrecoup* to the blow on the forehead. Mr. Shaw did not take this view of the case, but regarded the symptoms as the result of active inflammation, beneath the dura mater, of the wound,

struck the boy, it was supposed, on the head, as the child fell senseless on the ground. On examination we could not discover the slightest bruise, discoloration, or abrasion on the face or shaved head. Insensibility continued, and the lad died in eighteen or twenty hours. The examination of the body did not afford the slightest help in forming an opinion as to the cause of death; since the *post-mortem* appearances were wholly of a negative character.

and that the impaired functions, as it seemed, of the seventh and ninth pair of nerves were the effect of the erysipelatos swelling. The immobility of these muscles, he conjectured, resulted from the œdematous stiffening which cellular inflammation had left in its train. The accuracy of this shrewd and, to my mind, doubtful diagnosis was fully borne out by the *post-mortem* examination. The jugular was now opened, but only a few ounces of dark blood flowed; the temporal artery, and a vein in the left arm, were successively tried, but not more than seven ounces of blood could be obtained altogether. The pulse rose to 120, but diminished in power; the respirations became deeper and less oppressed, and the ghastly appearance of the countenance gradually subsided. A turpentine enema was administered, and as he already had taken repeated doses of calomel every four hours, it was deemed unnecessary to alter this part of the treatment. On the following day he was much rallied, but the improvement was of short duration, for in the course of the same afternoon he had another and more severe fit, and sunk in a few hours afterwards.

Post-mortem Examination Eighteen Hours after Death.—*Head.*—The frontal bone was slightly blackened; purulent matter oozed out from beneath the scalp around the wound. The calvarium being removed, a gush of lymph and whey-like serum escaped from beneath the dura mater on the *right* side. The whole of this hemisphere was coated with a thick layer of coagulable lymph, and the portion of dura mater immediately opposite to the wound was studded with spots of purulent matter, and the lymph on the cerebral surface, at this point, was unusually thick and firm. The substance of the brain was softened also, in the anterior lobe of this hemisphere. The arachnoid and the whole cerebral matter on the left side were perfectly healthy. There was no effusion or disease in the pons Varolii, or medulla oblongata, only that the lymph, on the right side, extended as far as the base of the brain.

The following fatal case of idiopathic arachnitis which has recently occurred, also may tend to illustrate the difficulties which surround this class of cerebral diseases. The symptoms, it will be observed, were quite of an opposite nature to the last-cited case, and yet the diagnosis was found to be a correct one by the *post-mortem* examination. I attribute this circumstance, in a great measure, to the fact that, in all acute diseases springing up in an idiopathic form, especially where those diseases attack organs that are essential to life, the recognition of a malady, both in its rise and progress, can be made through the study of the physiognomy, although the patient may be quite insensible, or, at least, unable to furnish us with any information about his sufferings.

ACUTE MENINGITIS—HYDROCEPHALUS—SOFTENING OF THE SPINAL CORD OPPOSITE THE SECOND AND
THIRD CERVICAL VERTEBRÆ.

Peter Groves, aged ten, errand-boy at a fishmonger's, was admitted June 15th.

Countenance extremely heavy, dull, and of a dusky colour; brows knitted; eyes half closed; eyeballs prominent, and rolled upwards; pupils dilated, especially the right; slight twist of the mouth, and a flatness of the left half of the face; left angle of the mouth drawn downwards; nostrils pinched up as in sniffing, and their angles depressed downwards and slightly outwards; feeble in the right arm and leg; skin covered with a dirty, greasy sweat; pulse full and slow; cannot protrude his tongue, or give any account of his sufferings, but he screams piercingly when moved, as though he was suddenly alarmed or frightened; and if he is roused for a moment, he turns on his side, and doses off immediately; scalp hot and flushed; bowels confined.

The mother stated that ten days ago he came home from his situation, and was unusually drowsy; but in two or three days more, after the action of some aperient medicine, he rallied and went out a little, but relapsed, and he had been lying at home constantly dosing ever since. She also observed that he could not hold his cup to drink with his right hand, whilst at tea, the preceding day.

The case was actively treated, by shaving the head, cupping, blistering, and calomel, &c. Notwithstanding the utmost antiphlogistic measures, the child survived only six days after his admission.

Post-mortem Examination.—*Head.*—Acute inflammation of the arachnoid over the base of the brain only, with layers of lymph, chiefly around the posterior lobes; ventricles distended with clear, pale serum. The medulla oblongata and spinalis, as far as the fourth cervical vertebra, was not only acutely inflamed, but there was ramollissement of the whole portion of nervous matter in this situation. No disease in the other two cavities of the body.

The portrait of this case forms one of the series of the collection in my possession, and which I hope shortly to publish*.

In concluding the subject of cerebral diseases, it may be mentioned that the assimilation of features of some of those derangements which are included in the second division of this first class are so strong, that it will be necessary to pass from the one to the other without any further remarks. Injuries of the head, accompanied with intoxication, narcotic poisoning, coma from a sudden invasion of urea upon the nervous system, sanguineous apoplexy, and hysteria, are so allied to each other in some of the broad outlines of physiognomy, that it is important to keep the mind closely bent upon these diseases respectively, and yet, at the same time, to attempt to point out wherein the main distinction between them exists.

However, I shall have occasion to advert to this interesting field of pathology when the subject of disorders of the stomach influencing the nervous system is alluded to; and, meanwhile, I would pass on to the consideration of cerebral asphyxia produced by the presence of narcotic poisons, and the circulation of urea in the blood of patients affected with degeneration of the kidneys.

CLASS I.

Division II. *Cerebral Asphyxia in Stupor; Countenance livid.*

From Narcotic poisons.

Coma.

Hepatic disorders.

Renal degeneration.

From Intoxication.

Syncope (hemorrhagic).

Facial paralysis.

NARCOTIC POISONS.

Of these cases, opium in substance, or laudanum, the most common of all the poisons taken for a suicidal purpose; essential oil of almonds, monkshood, foxglove, oxalic acid, veratria, and hellebore, have come under my notice during twenty-two years' hospital practice. With respect to the results of poison by the first of the above-mentioned narcotics, I may here remark that I have never been able to satisfy myself that the smell of laudanum could be distinctly traced in the matters brought off the stomach by the pump, in cases of narcotism by this drug; which negative evidence is contrary to what is asserted in some toxicological works. In the first of these poisons only is the pupil contracted, whilst in all the others the iris is dilated.

It is quite unnecessary to enter into any scientific details upon the subject of poisoning by the narcotic drugs above mentioned, as these matters are treated of in the works on medical jurisprudence and toxicology; besides, I have only enumerated those poisons which have been taken intentionally or otherwise, and which have actually come under my own observation, and am only desirous to allude to the subject practically, and that for the benefit of the younger branches of the profession.

Now, it is commonly stated by toxicological authors, when treating upon the subject of poison by laudanum, that, after the stomach has been washed out by the pump, coffee or green tea should be administered. This practice is really quite useless—nay, I believe is very often prejudicial. The stomach is only irritated by it, and neither beverage has the effect of keeping the nervous system in a state of insomnia. There is, however, benefit to be derived from constant, persevering, but moderate exercise in the open air; though the patient, at the outset, may be scarcely able to drag one leg after the other, yet have I seen such an individual led out into the hospital garden, supported by two strong men, and what with an occasional bastinado over the buttocks, in the form of a long, flat, and thin splint, pulling the hair, dashing the face with cold water, and then smartly rubbing it dry with a rough towel, and again goading the patient on to walk—I say, I have witnessed recovery from the very worst forms of narcotism by

* From the exceeding beauty of these paintings, which were executed by George Fogg, Esq., and the very great expense attending the engraving of them on stone, they are to be published in parts by subscription.

laudanum under such rough and apparently unfeeling treatment, whilst tea, coffee, and such like fluids, have been rejected as fast as they were swallowed. If a third person does not follow in the rear whilst the patient is walking, and lay on pretty smartly over his glutei, from time to time, as he flags and drags along, he will not be kept sufficiently roused to walk at all; and, when once he gets off his legs, you have an extraordinary difficulty to get him up fairly in walking order again.

But it cannot be too strongly urged on the attention of the profession, that all this unsatisfactory, rough, and wearying treatment can be wholly dispensed with by the employment of the electro-galvanic battery. The singular effect of this extraordinary agent is well described in a case recently published by the assistant-apothecary, who perseveringly employed it at my request in a most aggravated form of narcotism, with perfect success. The patient, a female, was roused up to complete consciousness in one hour from the time that this remedial agent was in operation.

Two days ago, also, a case of poisoning, by muriate of morphia, was submitted to the influence of the battery. She had taken five grains of the salt six hours before the police brought her to the hospital. There was no probability of recovery; however, the effect of this agent was most striking. On admission the countenance was of a ghastly, livid, and death-like expression; lips tumid and blackish; pupils greatly contracted; extremities mottled, blue, and cold. The respirations were two in a minute before we commenced, and the pulse 100. When the pump had emptied the stomach the pulse rose, under the influence of the battery, to 120, but in another quarter of an hour it sank to 80, and soon ran down to 60. All hopes of her surviving began now to diminish; however, the respirations were equal and deep, so long as the battery was at work upon the patient, but the moment it was suspended the breathing altered in its character. At the expiration of one hour we were induced to remove her from the chair, in which she sat, to the couch, in order that greater facility might be afforded to the operators; but, in so doing, the wire of the battery became displaced, and its action was necessarily suspended for three or five minutes; the alteration in the breathing, pulse, and countenance was sudden and marked. In less than eight minutes more she ceased to breathe, and the pulse was gone from the wrist.

On examination of the body, the brain was simply gorged with dark blood; this fluid had no where coagulated: it was black and thick in the left side of the heart, and there was a colourless mass of fibrine in the right ventricle. The stomach was merely ecchymosed in one spot, but all the other organs were healthy.

A very striking and successful case of narcotic poisoning, treated by means of electricity alone, has been published by a former house-surgeon, Mr. Hensley, who, with myself, kept up the administration of electric sparks, unremittingly, during five hours, when consciousness suddenly returned, and the patient rapidly recovered.

There is another point that I must here advert to in this part of my subject, and it is one of the greatest practical utility. In the after treatment of all cases of poison, but especially in those of the mineral poisons and oxalic acid, toxicological writers do not lay sufficient stress upon the importance of keeping the patient in a state of complete starvation, during the first two days after the poison has been taken. If a medical man has an acute case of iritis under his treatment, he excludes every ray of light from the inflamed organ; so also the surgeon who has a sprained ankle or fractured limb to treat, orders the injured part to be kept in the most perfect state of quietude: as, therefore, the light, which is the natural stimulus to the iris whilst in health, becomes an injurious agent under disease, so, in like manner, the natural excitement on the inner surface of the healthy stomach after food, would be prejudicial, if set up in an organ whilst it laboured under acute inflammation, so that the judicious practitioner is not only desirous of lowering this gastric inflammation, but he is careful not to allow any substance to pass into an organ, the direct tendency of which would be to increase that inflammation by the stimulating process of digestion.

A large number of cases of poisoning by oxalic acid have entered this hospital, in which no untoward symptoms have arisen, and, consequently, no fatal results have followed. I attribute this circumstance to the measures that have been invariably adopted in such instances. It is somewhat distressing to a patient to suffer from urgent and intense thirst, and yet not to be allowed the gratification of swallowing a pint of liquid, as tea or toast and water, every ten minutes or so, but to have some bland fluid, as barley-water, served out to him in teaspoonfuls, every half hour; yet such is the treatment that I strictly enjoin during the first two or three days after the stomach has been emptied of its deadly poison.

In all these cases the most perfect abstinence is rigidly adhered to, by strict injunctions to the nurse, and even,

as is necessarily the case here, to the patients of the ward also, lest the earnest importunities of the suicide, to obtain some food, should induce the neighbouring persons to give it. I am certain that this point is most important; and, therefore, I would caution my readers not to allow such a patient more than one pint of barley-water, and this to be sipped at, and so consumed in the course of a day and night, for the first two days, in such cases of poisoning.

Many years ago I casually heard, from one of our more observant nurses, that all the leeches applied to persons who had taken oxalic acid died soon after they fell off. Knowing the solubility of this acid in the stomach, I did not doubt the fact; however, I was not satisfied until I had watched the animals myself; and I have seen them drop off the surface, curl, and wind about, shrivel, and die in a short time.

But since the above period I find that Professor Christison, in his admirable work on "Poisons," notices the same fact, which was communicated to him by a medical gentleman. But I am sure that the Professor might ascertain for himself, that these animals die very soon after they fall off from the patient. I am not aware that this singular effect results from any other poison which may be taken into the system.

The subjoined table will present, at one glance, the various poisons, &c. which have been taken, mostly for a suicidal purpose, together with the attempts to destroy life by other means, by each sex, during the space of seventeen years. The number, through that period, that have been relieved, and sent away as out-patients, has also been considerable; but these casual cases are not included, but only those individuals in whom the dose taken, and the severity of their symptoms, warranted us in admitting them as patients into the medical or surgical wards.

	Laudanum.		Oxalic Acid.		Laud. and Oxalic Acid.		Aconitine Acid.		Cut Throat.		Hydrocyanic Acid.		Acid. Sulp.		Plumbi Acet.		Cupri Acet.		Kerosene.		Hydr. Ammo. Chlor.		Equinia, or Glanders.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1832	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1833	3	6	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1834	2	1	1	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1835	1	4	1	4	—	—	1	2	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1836	2	5 ^a	4	2	—	—	—	1	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1837	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1838	7	4	1	1	—	—	1	1	—	3	—	—	—	—	—	4	—	—	—	—	—	—	—	—
1839	3	6	1	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
1840	1	5	1	5	1	—	—	—	1	2	3	—	—	—	—	1	—	—	—	—	—	—	—	—
1841	3	1	—	4	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	1	1	—
1842	3	4	—	1	—	—	—	1	2	2	—	—	—	—	—	2 ^k	—	—	—	—	—	—	—	—
1843	1	6	2	4	—	—	—	—	2	2	1	1 ^l	—	—	—	2	—	—	—	—	—	—	—	—
1844	1 ^b	1	—	2	—	—	—	—	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1845	1 ^c	1	1	—	—	—	—	1	1	3	—	—	—	—	—	—	—	—	—	—	—	2	1	3 ^m
1846	—	1	—	2	—	—	—	—	—	2	—	—	—	—	—	2	—	—	—	—	—	—	—	—
1847	1	4 ⁿ	—	1	—	—	—	2 ^o	3	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—
1848	—	1	—	—	—	—	—	—	—	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	30	55	17	29	1	2	10	13	41	13	2	1	1	5	1	15	2	3	2	2	—	6	5	—

^a One of these was crude opium.

^b This was a remarkable case of resuscitation by electro-galvanism.

^c Liq. opii sedativus. A medical assistant.

^d Arsenic and laudanum combined.

^e A medical assistant; found dead in a hackney-coach; the bottle (an oz. phial) found under the straw.

^f Dead on admission.

^g An army surgeon. Dead on admission.

^h A perfect tube (the sloughed oesophagus) from the pharynx to the cardiac opening of the stomach was thrown up, and is preserved in the Museum.

ⁱ Sulphuric acid and laudanum combined.

^k One of these poisons was liq. plumbi diacet.

^l Poisoned by the cupri acet. in eating the sweet ornaments on French cakes.

^m *Vide* public press of November, 1845, for an account of these three cases.

ⁿ One of these was a fatal case of poisoning by morphia hydrochloras; it was taken in a public-house six hours before her admission; it was computed that she had taken six or eight grains, which she procured at a chemist's who had been in the habit of selling her small quantities for relief to severe periosteal pains after syphilis. Electro-galvanism proved of temporary benefit, but she died one hour after the police brought her.

^o These were two children, who, with eight or ten others, picked up and ate some sweet-cake ornaments thrown into the street from a confectioner's shop. The poison was arsenite of copper. One child died at home. These two recovered, and six others were seriously ill.

^p The cupri sulphas was taken in this instance.

^q This was a lad of nineteen, who attempted strangulation, after taking the sugar of lead, by fastening his handkerchief to the door, and was brought here black in the face. On my sending for a policeman to take him before a magistrate, he roused up, slipped away, and ran off.

In addition to the above cases there were the following:—

	M.	F.		M.	F.
Strangulation	1	0	Æther rect.	1	0
Hydrochloric acid	0	1	Hydrophobia	1	0
Nitric acid	1	0	Italian family, six in number, supposed to be poisoned by		
Nitro-hydrochloric acid	0	1	“aqua tophana,” administered maliciously	4	2
Muriate of tin	1	0	Drowning	1	0
Carbonate of barytes	0	1	Carbonic acid gas, or carburetted hydrogen, from cess-		
Zinchi sulphas	1	2	pools, &c.	2	0
Liq. ammoniæ	0	3	Struck by lightning	1	1
Nux vomica	0	1			
Hydr. nitr. oxyd.	0	1			
Iodine	0	1			
Essential oil of bitter almonds	1	1			
				127	144
			Total	285	

APOPLEXIA RENALIS,

From renal degeneration, is a disease that has been so frequently mistaken for sanguineous cerebral effusion on the one hand, and for poison by laudanum on the other, that we may group the affection with cerebral asphyxia, for the purpose of showing the assimilation of features of the three diseases. In order to effect this, I think I cannot do better than present to the reader an abstract of two striking illustrations of the above affections, namely, narcotism by laudanum, and insensibility from the presence of urea in the brain, which were published by me soon after the period of their occurrence. The one (of laudanum), a male patient, had taken an ounce and a half of this drug six hours before admission, and he was, to all appearances, dead when brought into the room; the pulse was intermitting, the respirations convulsively performed, and not more than two in a minute; the face livid; pupils contracted; and the extremities bluish and cold. After the administration of the stomach-pump, electro-galvanism and electricity, from our powerful machines, were separately employed. In three hours, he roused up suddenly, and as it were from an almost lifeless state, to one of excitement and anger, calling us “brutes,” “savages,” and “beasts,” for trying our experiments upon him. He left the hospital quite well soon afterwards, but eventually killed himself by drowning.

The second case (apoplexia renalis, or ischuria renalis), in a female, was admitted labouring under the very same symptoms. Perfect insensibility, which had existed ten hours prior to her entrance into the hospital; contracted pupils; and convulsive, slow breathing. She died in four hours and a half after her admission. There was strong presumptive evidence that she, also, had taken poison, as a three-ounce phial, containing laudanum, was seen the preceding day, and could not now be found. However, it was proved on the inquest that the laudanum had been used the previous night by her niece, as a liniment over the loins for severe pain experienced there, and that she never had been allowed to touch it as an internal medicine. The examination of the body, after a patient investigation, left no doubt that the cause of death arose from advanced “morbus Brightii.” The kidneys presented the usual ravages of that disease; the bladder was perfectly empty, the size of a walnut; and the medical gentleman who had been in attendance upon her for some months, stated that the urine, when any could be obtained, was always highly albuminous, and that anasarca had shown itself some weeks prior to her fatal attack*.

I may here remark, too, that the shocks of electricity produced a faltering of the pulse and a diminution of the vital powers in this instance; whilst, in the first case, they evidently acted most wonderfully and powerfully upon the brain and general circulation, rousing the respiratory system to a surprising activity in the course of one hour after the administration of this therapeutical agent.

On another occasion a man was brought into the hospital by some strangers, having been found in a stable on the horse’s bed. He was perfectly senseless. Countenance bloated and dingy, pupils contracted, and breathing laborious; pulse full and jerking. It was a difficult point to decide whether these symptoms were the result of a

* I am not sure that our Professor of Chemistry did not obtain some beautiful crystals of nitrate of urea, from the fluid which we collected for his analysis, in the ventricles of the brain in this female. But I have seen this salt procured, on other occasions, in considerable quantity from the same fluid, in fatal cases of cerebral effusion, consequent upon the disease termed morbus Brightii.

kick from the horse, intoxication, apoplexy, serous effusion into the ventricles, or poison from some narcotic drug. As there appeared a slight tendency to convulsions over the features of the face, it might have been the sequel of an epileptic fit; however, none of these surmises proved correct, for, whilst the servants were busy in undressing him, his feet were observed to be œdematous. A catheter was passed, and a few drops of urine were obtained, which was highly albuminous on the addition of nitric acid. The case now was made clear to our minds. It was poison from urea, the result of ischuria renalis. His head was shaved, blood was taken from his temples by leeches, he was made to swallow a purgative draught, and a turpentine enema was administered. He rallied out of this comatose condition, and then informed us that he had suffered for a long time with aching pain in his loins, occasional giddiness, and dimness of sight; that his urine had been scanty of late; and that "his head became so bad" that he fell down whilst cleaning the horses, and was unconscious of all that had passed since. He was cupped to the loins, and had repeated doses of our Pil. Elaterii co., with warm baths, and ultimately recovered, though the urine still remained slightly albuminous. Some scores of such insidious and difficult cases could be enumerated, which have been mistaken by the practitioner, before he has sent the patients here, for apoplexy; and active depletion has been resorted to under that impression; whereas, the rapid evacuation of the bowels, by powerful doses of elaterium, and moderate leeching to the temples, and blistering to the vertex of the head, have proved the most successful plan of treatment in these wards. Some cases have terminated fatally, and crystals of nitrate of urea have been obtained by the Professor of Chemistry from the fluid in the ventricles of the brain, as I have already remarked. There is no stage of albuminous disease of the kidney at which this suppression of urine, and subsequent coma, may not creep on. A large secretion of pale, light urine, of a low specific gravity, with little or no albumen, may as suddenly become suppressed, as a small quantity of this secretion, which is muddy and like small beer, frothy, and loaded with albumen. The main test is the high specific gravity, as this will always inform us whether a due proportion of solid material is eliminated by the kidneys. The presence of albumen is a secondary consideration.

In connexion with the foregoing remarks it should be observed, that serious disturbance takes place in the brain from another form of renal disorder, totally opposed to the one just adverted to. There is no disease in these organs, but they are rather acting as the "*medicatrix naturæ*," in striving to separate noxious principles from the system; and this they do in the form of lithic acid crystals. The disorder is usually set up in persons who have lived well upon animal food, who are bony, muscular, and well-formed individuals.

A man has just left the medical wards under the care of Dr. Hawkins, who was of this description; he worked at the City barges as "hopper," and, not being such a tippler as most of this class, he ate heartily of animal food several times a day. He came to us labouring under "epileptic fits." He was a most athletic fellow, and, had he not been attacked with a fit in the hospital, one would have been disposed to doubt the statement he made of his previous seizures. He had constant pain over the right hemisphere, with some vertigo, tinnitus aurium and slight deafness. Various plans of treatment were tried without avail, when at length, whilst under the influence of a diuretic, judiciously administered for the relief of his cerebral disturbance, he continued to pass every day, for a week or so, upwards of half a teaspoonful of red sand. His head symptoms rapidly disappeared, and he left the hospital perfectly convalescent.

The following comparative analysis of the elements of urea, bile, sugar, and lithic acid may not be uninteresting to the reader:—

	Urea.	Bile.	Sugar.	Lithic acid.
Hydrogen	6.66	8.30	6.66	2.85
Carbon	19.99	58.46	39.99	34.28
Oxygen	26.66	22.64	53.83	22.85
Nitrogen	46.6	3.70	—	40.00
	100.00	100.00	100.00	100.00 *

* Dr. Prout on "Urinary Diseases."

COMA, OR TEMPORARY LOSS OF CONSCIOUSNESS FROM BILE, WORMS, &c., OR OTHER IRRITANTS.

Here, indeed, a wide field for observation is presented in this hospital, and fresh opportunities of viewing the chameleon colours of these changeable appearances are occurring daily.

In private practice, also, I doubt not that a very large number of disorders are constantly occurring, the symptoms of which are termed "apoplectic," "tendency to apoplexy," &c. &c., but which, in truth, may be called "biliary congestion," "hepatic engorgement," "pent-up, or morbid cystic bile." I will, however, proceed to mention what I mean by these terms, and, in doing so, I may add that I now write, unfortunately, from some little personal experience of former days. An individual presents himself to your notice, describing his symptoms. He is a robust, well-formed man, from thirty to fifty; inclined, perhaps, to corpulency, and may-be he is "pansu," or, as the pauper females term it, high-stomached. He is fond of living freely upon animal food and beer, &c., and follows a somewhat sedentary life. He relates that he is occasionally attacked with pain over the forehead, to such a degree, that he becomes quite muddled and unfit for work, or unable to exert himself either mentally or bodily, in his daily calling. There is, from time to time, tinnitus aurium and vertigo; he gets rather deaf in one or both ears; his sleep is either more heavy and prolonged than usual, or it is attended with horrid and disagreeable dreams, and he is more restless and feverish than he is wont to be. He has but little appetite, his knees totter under him as he walks, his heart intermits, he is occasionally short in his breath, and he thinks himself weak and out of sorts; but does not know where he is ill, as he suffers little or no pain. Now, these ailments are the forerunners or shadowings forth of a more serious train of symptoms, which may, and do often follow, if active measures are not adopted for their mitigation. The patient goes on to describe a numbness felt down one arm and leg, an odd sensation in the face of the same side; his former symptoms continue, and he becomes uneasy and seeks for relief. When you see him enter the hospital admission-room, you observe an awkwardness of gait, and tottering or dragging of one leg, an expressionless countenance, and a dull, heavy eye. He is evidently very low spirited, perhaps bursting into tears before he has told half his sad tale of suffering. Well, such cases formerly would have been called, and still are called, by a very large class of practitioners, "apoplexy," and they are not considered safe, nor is it deemed legitimate practice, unless the arm is instantly laid bare, and the lancet is made to let out twenty or thirty ounces of blood, with subsequent cupping or leeching in an unsparing manner to the head, &c. Whereas the experience which I have obtained, from the vast number of cases which are successively presented in this hospital, has confirmed me in the belief, that this treatment is both useless and prejudicial.

As soon as the patient is in bed, a full dose of calomel and colocynth, such as five grains of the former, and ten grains of the latter, is administered, followed up in four hours by a large cathartic draught; his head is shaved, and, if there is much heat about the forehead, eight or ten ounces of blood may be taken away by cupping behind the ears. But this is by no means an ordinary part of the treatment. In the course of the following morning the nurse shows us a copious evacuation, dark, as the darkest mahogany or chocolate, fetid, abominably so, and containing but little faecal matter. This is cystic bile—bile that has been "laid up" in the gall-bladder—that has become inspissated, heavy, and morbid, and could not find its way into the common duct, owing to the gorged state of the hepatic biliary system on the one hand, and to the congested mucous surface of the duodenum and stomach on the other. This bile is, therefore, a noxious accumulation, a morbid product, and acts as a poison upon the nervous and vascular system, just in the same way, and in somewhat a similar manner, to the poison of urea when it circulates in the blood, and is not sent forth by the kidneys. The dose is again and again repeated, perhaps for five, seven, or ten times, and at length pure healthy bile passes away, without fetor, of a canary colour, and emitting a faint odour very analogous to the smell of the narcissus, or daffodil flower. The head becomes clear; the intellects brighten up; the patient is lively, active, and in good spirits; the sleep is tranquil, refreshing, and moderate; the appetite becomes keen; and he walks across the ward with a firm, steady, and equal pace. But, although this manifest improvement has taken place since he has got rid of the "pent-up poison" that lurked in his system, yet does there still remain a slight weakness of the arm and leg. This practice has been attended with singular benefit. A blister is now laid over the

whole length of the longitudinal sinus, and the discharge is kept up from its surface by means of the savine ointment, whilst the purgative treatment alluded to is still persevered in from time to time. Thus have I seen cases, but especially during the last season, become perfectly convalescent, and leave the hospital without the slightest appearance of hemiplegia, and without having undergone any depletion.

The following is an instance of many such cases:—A female, about forty-five, entered an hotel in Bond-street, as charwoman, between six and seven o'clock in the morning (in March), and soon afterwards became faint, sat down in a chair, when the "boots" went and called up the master, who came down, and, finding her speechless and unable to walk on one leg, instantly ordered a cab, placed her in it, and came himself to the hospital with the patient. I was called up and saw her immediately on her admission, and, finding that she was of a spare habit and not a free liver, I was resolved to use no active depletion, but to commence unloading her liver by calomel and colocynth, in no measured doses. Of course the master knew little of her habits, as she was merely an occasional scourer in his kitchen, &c., only that she was not addicted to drink, as he informed us. I believe it would astonish many practitioners, had they witnessed the progress, and gratifying termination of this case, under the decisive treatment which was here adopted by the physician of the week. After the evacuation of large quantities of dark bile, of the most fetid nature, penetrating in offensiveness of smell to such a degree, that the moment a person entered the ward (thirty feet by eighteen) he might detect its effluvia; and after the free discharge of a blister applied over the whole vertex of the head, and when pure, pale, rhubarb-coloured bile began to flow, this patient not only regained the full use of her speech and faculties, but she got up, dressed, and fed herself—in short, walked about the wards and hospital garden, and left the institution as perfectly free from those symptoms, for which she entered it, as though she had never been the subject of such an alarming attack.

But I need not pursue the subject, although many, very many, such instances could be adduced, on the male as well as on the female side of the building, whose cases are recorded by the clinical clerks in their reports of the physicians' patients.

I have often had occasion to remark, that, where a train of nervous symptoms arises from other causes than that of cerebral disease or lesion, the symptoms are by no means defined, regular, or consistent.

The injury offered to the brain by a blow, bruise, or effusion—as in compression, sanguineous apoplexy, scrofulous disease, or tumour of the cerebral substance—oftentimes presents a consistent train of nervous symptoms. But where the brain is the after sufferer, and not the *fons et origo* of the train of symptoms presented to our notice, the nervous system is more undefinedly attacked, and the evidences of such an attack are equally incongruous. For example, here is an instance of cerebral disturbance just related, which would lead a discriminating pathologist to conclude, that the woman was suffering from effusion into the crura cerebri, pons Varolii, or cerebellum; she was speechless, and that, too, for several days. If it had so proved, death would almost have inevitably followed. But then there is hemiplegia, which is *not* the early attendant of a sanguineous clot in this portion of the brain. Her speech returns perfectly before she obtains the full power of her limbs. This undoubtedly is the reverse in those instances of cerebral lesion where the patient is deprived of speech: the injury offered to the ninth pair of nerves, in apoplexy of the medulla oblongata, is scarcely ever so fully repaired as to enable the individual to articulate with clearness and freedom, although he may be able to walk about with firmness and vigour.

These observations will be found strictly correct, not only under the head of those hepato-nervous diseases (disorders, should I not call them?) which I have been endeavouring to elucidate, but also under another fruitful source of hemiplegia, which is by no means rare in the practice of the medical wards of an hospital: I allude to the presence of worms in the intestinal canal. The following instance will explain my meaning, I hope, more fully:—A tall, robust countryman, from Berkshire, was admitted into the hospital last year, with the following malady:—His countenance was healthy, but his features were void of expression, there was a dulness of physiognomy; he complained of partial loss of sight of the *left* eye; the iris was natural and active. He had also a numbness extending down the *right* arm and leg, and over the *left* side of the face. He suffered from occasional giddiness, so that he was oftentimes afraid to trust himself to walk alone even across the ward. The numbness down the leg was, occasionally, so severe that he could not walk even from his own bed to that of the next patient. His appetite and his spirits were tolerably good,

and with the exception of a former attack of rheumatism, which had left sufficient traces of endo-cardiac disease to spoil the rhythm of the heart's sound, there was no assignable cause for the present train of symptoms. However, the country practitioner deemed it advisable to put him under treatment, as though cerebral disease was slowly advancing: he was cupped, blistered, bled, and kept very low; but he derived no benefit whatever from this course of practice. His varying symptoms were narrowly watched; the numbness would suddenly leave one arm and attack the opposite, and remain there for some days. It was considered at the time that the disturbance in that "nicely balanced engine," the heart, might account for these nervous ailments, and our attention was more particularly directed to this organ; he took digitalis with some transient benefit; was occasionally blistered and cupped to the head and neck; but still the disease remained unabated.

I must here pause a short time, and digress somewhat from the subject immediately before me, in order to relate the following curious circumstance.

It is now upwards of two years ago, when Dr. Hawkins admitted into the physicians' wards a fat, chubby, and rosy-faced girl from the country, who had been sent up by her master, although she presented the picture of health, on account of a "nasty, disagreeable" cough, which so disturbed the servants, nay, the whole family, that she was quite unfit for his service. She ate, drank, and slept heartily enough; but, when this fit of coughing seized her, it rang through your head, and was almost insupportable. However, it proved equally as obstinate in the wards of the Middlesex, as in the country village. She had been with us upwards of three weeks, when, like most of our country patients who come in here with no very serious ailment, she was attacked with slight fever, sore throat, and headache—the result, as we believed, of confinement in a London hospital. She was ordered a smart emetic, that it might cut short, if possible, the attack, and a brisk purgative at night; on the following day the nurse drew from under the bed a lumbricus, which she had passed, measuring three-quarters of a foot. I need scarcely add that the girl soon left the hospital perfectly free from cough and every other ailment.

But to return. Just as we were growing weary with this line of practice, and yet not being able to lay the disease at the door of any other organ than at the heart or brain, the man exhibited to me, at the usual visit, a joint of a "tænia lata," and, on being interrogated, he said that he remembered passing similar pieces several months ago; that he "took physic" for it, and thought he had got rid of them all. Soon after this, however, he observed, the before-mentioned train of nervous symptoms set in. Acting, therefore, upon the extraordinary effect of the emetic on the country girl, this man was ordered one, and in the course of the following day he passed two or three dozen detached pieces and joints of a tænia lata. He then took the oils of turpentine and castor combined, but they failed to bring away many more. At length the pomegranate was resorted to by Dr. M. Crawford, when several joints passed, and I believe the head amongst them. The man rapidly recovered from every one of his nervous feelings, and left the institution perfectly convalescent.

Having thus briefly noticed another of the sources of irritation to the cerebro-spinal system, I must just glance at a third cause. But it should be borne in mind that one, and all of these causes, produce symptoms that are so analogous to those arising from disease within the cranium, that even a discriminating practitioner will sometimes be perplexed as to the line of practice he ought to pursue. Yet is there one point most worthy of attention here. It rarely can do harm to your patient if you freely purge him with calomel, colocynth, &c. &c., shave the head, and keep open a blister on the vertex. But, if you set out by taking, unnecessarily, twenty or thirty ounces of blood from him, it is impossible to say how serious the consequences may be. Wherever there is doubt as to the propriety of depletion, it is wise to let the patient have the benefit of that doubt, and to postpone the severest means, until we find that brisk and repeated purgation, and the unloading of a gorged liver and gall-bladder, have produced no real improvement.

I believe it has been stated, upon the very best evidence, that there is no greater poison which is slowly consumed by the indigent poor in this metropolis and other large towns, than that of three-and-sixpenny tea, so called. I have been informed by a merchant, who is versed in these matters, that the cheap teas of London are not worthy the name of teas at all*; indeed, we need not wonder at such an assertion after we have read the able expo-

* Consult "Essay on Cultivation, &c., of Tea in Java," translated from the Dutch by Thos. Horsfield, M.D., F.R.S.

sition of the frauds practised by the Chinese, which Mr. Warrington laid before the public in the year 1844. It will be found in the first and second numbers of the fourth volume of "The Pharmaceutical Journal." This gentleman there states that the Chinese turn a green into a black tea, and *vice versâ*; that "all the green teas that are imported into this country are faced, or covered superficially, with a powder consisting of either ferrocyanide of iron, or of sulphate of lime, previously stained with prussian blue; and that such teas are never consumed in the country, but are invariably exported, of course, mainly to these islands."

Mr. Davis, in his work on the Chinese, was eyewitness to these frauds: old black tea-leaves were made to assume the fine bloom of green teas through the means of prussian blue*.

The following observation occurs in "M'Culloch's Dictionary":—"Blue is a favourite colour with the Chinese, and in 1810-11 the imports of prussian blue into Canton, from England, amounted to 253,200 pounds. But for some years past the Chinese have not imported a single pound weight. The cause of the cessation of the traffic deserves to be mentioned. A common Chinese sailor, who came to England in an East Indiaman, having frequented a manufactory where the drug was prepared, learned the art of making it, and on his return to China he established a similar manufactory there with such success, that the whole empire is now supplied with native prussian blue†."

It is only two or three weeks since that one of the many instances of the evil effects of bad tea was witnessed in a case of hemiplegia in these wards. By the evil effects of tea, it is not meant that this delightful beverage is the immediate cause of producing any disease analogous to paralysis; but this we may assert, that the indiscriminate use of the adulterated, cheap, and noxious article, sold to the poor at 3s. 6d. per pound, called tea, is the fruitful source of dyspepsia, flatulence, palpitation, loss of appetite, constipation, piles, and a distressing train of biliary derangement; and thus is it the proximate cause of many painful and insidious disorders of the nervous system.

The most recent case, as I observed, occurred two or three weeks ago. A female, aged forty, married, with a family, was attacked, for several weeks prior to her admission, with numbness down both arms and legs—severe, occasionally, in one leg, whilst there was temporary ease in the other. She dragged her *left* leg after her. There were twitchings and some loss of sensation in the face on the *right* side. Her intellects were perfect, but she was nervous and low spirited to a most painful degree, scarcely able to describe her symptoms without crying. I am well aware that all these derangements may be produced by indulgence in ardent spirits, and that some may argue that, when they get into an hospital, they are deprived of this stimulus, and thus lose their disorder. But this argument will not bear upon the far greater number of those cases which occur amongst the out-patients, as these persons have still the means of obtaining their drams, and yet, upon their abandoning tea, they lose these distressing symptoms. However, this patient was strictly prohibited from drinking tea; and when she found herself rapidly gaining strength, appetite, spirits, and vigorous health, she declared that it should be a long time before ever she would touch tea again, as she could not have supposed she should feel so well, as she had done, since giving up that beverage.

During the last few years, my mind has been much engaged in observing a singular train of symptoms which the climacteric period in females commonly induces. The symptoms are no where classified, as far as I can find, by medical authors, nor are they traced up, when noticed by writers, to their true source.

The disturbance which is now alluded to I may at once describe. The subject of it is usually from 30 to 45 years of age, and it ordinarily occurs more frequently in those who have had no family, or are unmarried; in those, however, who are married, and have borne children, the disease usually succeeds the climacteric period of life.

The symptoms, as far as I have hitherto observed, are ushered in with occasional flushings of the face, succeeded by more or less perspiration, a sense of faintness, and subsequent depression of spirits; sudden pain then ensues, either occipital, frontal, or in the course of the longitudinal sinus, where, as with some women, the hair is parted; the sensibility of the scalp is increased, and the pain is oftentimes momentary in its onset, and partial in its seat. As the disorder advances there is more or less noise in the head, described as humming, buzzing, singing, or rumbling; then comes on deafness of one ear, *muscæ volitantes*, palpitations, irregular action of the heart, an oppressed pulse,

* "Davis's Chinese," vol. ii. p. 468.

† "Proceedings of the Chemical Society."

a weight over the forehead, or at the back of the neck; a frequent sense of formication over the face and chest, especially whilst the person is warm in bed, and about to lose themselves in sleep, cramps in the legs, transient numbness in one arm, usually the left, and pain passing down the hand, and into one finger. Extreme mental and bodily depression, a peculiar feeling of dread hangs over the mind whilst the attack is hovering about them, and the least excitement, as the slamming of a door, or the double knock of a postman, will throw them into a most distressing fit of nervous suffering. The disorder is attended oftentimes with a species of fit, not unlike that of epilepsy; and anæsthesia, or paralysis, or both, of one arm and leg may occur and remain for several days.

The patients are sometimes attacked with violent and excruciating pain on the vertex of the head; the feeling, as they describe it, is as though some one had given them a severe blow on the skull. They reel and are momentarily stunned, but they never lose their consciousness; slight nausea, copious eructations of sour wind, flushings of the face and neck are succeeded by faint, clammy perspirations, sinking and sense of oppression at the stomach, and palpitation.

One lady with whom I am acquainted has been seized, in addition to the above symptoms, with sudden pain in the lumbar region whilst walking in the streets; and on two occasions has fallen down screaming piercingly with the attack; on another occasion it was brought on by being hurried into the carriage of a train which was in motion, and the alarm which she caused to the rest of the company was of no ordinary character. She is the mother of a large family, and is capable of undergoing great mental exertion when free from these symptoms.

The period of time at which the attack comes on, or is aggravated, is also worthy of remark. If the individual does not rise in the morning with these cerebral disturbances, they will come on in the after part of the day, and they are especially aggravated if a sense of hunger ensues and it is not speedily gratified. I should observe, also, that there may be flatulence, some obstipation of the bowels, and a capricious appetite. A spontaneous separation of crystals of pure lithic acid, will oftentimes remove the distress for weeks, when it recurs with equal severity.

The individuals who appear most prone to these distressing symptoms are those who inherit a gouty diathesis, who live freely on animal food, and who have been the subject of great mental exertion. The stomach is the first organ which develops the attack, although the uterus, it should be observed, is the viscus originally in fault. There has been menorrhagia, or dysmenorrhœa, with more or less debilitating leucorrhœa.

The catamenia have been "dodging" the patient for some months, and, under an apprehension that this secretion was about to terminate altogether, the patient has kept silence upon the matter, and sought for no medical advice, until the constitution has become unstrung, the fluids vitiated, the stomach deranged, the mind harassed, and oftentimes, not until then, have they been compelled to seek for medical aid. The physiognomy in such instances is frequently very instructive; there is a sallow tint around the eye, a heavy expression of face, and a general sadness depicted in the countenance. They tell you that they are often seized with partial dimness of sight, duplex vision, or that they are deprived of the power of distinguishing one-half of another person's face, just as the late Mr. Abernethy was wont to describe to his class, the effects of injuries or of fracture to the crista galli of the ethmoid bone. One gentleman, Mr. A. used to remark, "could never read my name on the door; he always saw 'Aberne,' but no 'thy;'" and a patient now before my mind can sometimes discern the chin, mouth, and nostrils of any one before him, but the upper half of the face is covered with a mist; at another time, only the longitudinal half of the face can be discerned; and this symptom will remain for two hours or more, and be succeeded by an intense headache.

I am by no means disposed to assert that similar disorders of the nervous system do not spring up in the male subject also, but I consider these as incidental to the sex, whilst they are peculiar to the female sex. The gentleman just alluded to is of a very nervous temperament, ex-sanguine, and the subject of great mental excitement from time to time. He suffers from a constant sense of acidity on the tongue, and the saliva is strongly acid to litmus paper.

Many instances of the above malady have been erroneously classed under the titles, "apoplexy," "cerebral congestion," "threatenings of cerebral effusion," &c., and the lancet, with local depletion, have been unsparingly employed. Such antiphlogistic measures have invariably added to the mischief, and have increased the patient's sufferings.

The explanation of these morbid changes and symptoms appears to be this: that the catamenial secretion, from

some constitutional cause, which is probably seated in the organs of assimilation, becomes altered in quality and in quantity;—the elements of this fluid are thrown back on the circulation, and morbid bile on the one hand, and a lithic acid diathesis on the other, is the ordinary result. There is no organ in the female economy that so readily partakes of disturbance from uterine irregularities as the liver; and the instances are not few where protracted menorrhagia has resisted astringents, quinine, and the ordinary treatment, whilst it has yielded to brisk and frequent purgation, with small intermediate doses of calomel, &c. In such cases the uterus takes on the action of the liver, and so long as the latter viscus is allowed to remain in its torpid condition, so long also will the uterus continue to pour out an undue quantity, or an altered quality of dark venous fluid, and the patient becomes enfeebled, harassed, and distressed; hæmorrhoids are not unfrequently induced also. But no sooner, oft-times, do the remedies tell upon the hepatic branches of the portal system of the liver, than the intestinal portion of the same system becomes relieved from its congested state, and the uterine discharge is shortly subdued.

It was from such observations that my mind was originally led out into the study of these painful attacks of the nervous system, and I can confidently assert, that a very large number of women, who would have been treated ten years ago with frequent bloodletting, and other antiphlogistic remedies, have been perfectly convalescent from a totally opposite method. The stomach, liver, and kidneys, appear to be the principal organs which suffer from derangement; and, in order to restore to the former viscus its healthy tone and vigour, scrupulous attention must be paid to the diet. Veal, pork, salt meats, fried and broiled fish, vegetables, except potatoes, tea, pastry, and made dishes, or ragouts, wine, bottled beer, or any liquor containing a free acid, or gaseous matter, appear to aggravate the disorder in a marked degree. Mutton, roast and boiled, fish, poultry, fresh game, cocoa nuts boiled, or coffee, not too strong, and good draught ale, is the most agreeable diet for such a stomach; but the benefit derived from taking six or twelve fresh oysters without any other food, or additions, as pepper, vinegar, &c., or even bread, upon an empty stomach, as for luncheon, for instance, has been most remarkable in some severe cases which I have witnessed. Their alkaline character has removed the morbid acidity of the stomach, whilst it has restored its tone and vigour, and the following draught has been ordered to be taken every morning on rising:—℞ Ammoniae hydrochloratis, grs. x. Extr. taraxaci, ʒss. Dec. aloes comp. Mist. gent. comp. aa. ʒv. Sodæ pot. tartratis ʒi. Tr. lavandulæ comp. mxx. fiat haustus.

If this aperient should not prove of sufficient activity, it must be repeated in the middle of the day; but, on the other hand, if it is too active, the draught may be only taken every other or every third morning, yet it is of greater importance that the alimentary canal should be freely acted upon once or more daily, than that it should be allowed to continue in a torpid condition.

The alvine evacuations are usually offensive, fetid, and so dark, that I have known them to partake of the character of the motions of a patient with melæna for several days together, and I am inclined to think that it is from the fact that practitioners do so rarely submit these excretions to ocular examination, that many cases of this disorder are misunderstood, and therefore mismanaged.

Another useful remedy is to clothe the loins with the emplastrum opii (Ph. Lond.), or else with a long slip of new flannel; and, in order to assist the liver in its healthy functions, a warm bath and occasional friction over the skin with sand-soap or a horse-hair glove usually promotes the healthy action of the abdominal viscera.

Whenever the urine ceases to deposit lithates, and becomes a pale canary colour, and the evacuations from the bowels present a healthy appearance, and cease to emit a penetrating fetor, there is a co-existing amelioration in the sufferings of the patient. Her spirits are more buoyant, her mind less distressed, her appetite more even, and her whole frame less weary.

But it has frequently happened that all these remedies have failed to give complete relief to the sufferers, but the most decided amendment has succeeded to the application of one or two blisters successively applied to the forehead. I am further satisfied also that the same amount of relief is never obtained from this application to other parts of the head, such as the nape of the neck, or behind the ears, as is produced by a copious drain from the region of the frontal sinuses, &c.

I trust that these few remarks may induce some of my professional brethren to ponder over the concurrent

testimony of such a train of symptoms when they meet with them, and pause before they rashly conclude that they are wholly referrible to vascular congestion of the brain, and require active depletion, &c., for their alleviation.

INTOXICATION.

A patient is brought into the hospital, perhaps on a policeman's stretcher, or he is carried in by friends, who state that he was picked up in the streets, senseless. His pupils are dilated and immoveable; his breathing is deep, low, and heavy, the expiration being short and abrupt, whilst the inspiration is a prolonged deep sigh, with more or less stertor; the pulse is full and strong. The suspicion arises that the man has sanguineous effusion into one or both ventricles of the brain. But it must be again acknowledged, that, of all the perplexing, deceitful, and varying symptoms which diseases occasionally put on, those of cerebral lesions or mere cerebral disturbance are, of all others, the most difficult to decide upon. We have admitted cases into the hospital in the dead of the night, brought here by policemen, who have found the patient lying senseless, or he has been seen to fall senseless on the pavement: we have bled, blistered, leeches, and purged; shaved the head, and given turpentine enemata, but all to no purpose; insensibility has remained; when, to our surprise, in twelve hours afterwards we have gone to visit our patient, we have found him perfectly sensible and tolerably well, not more surprised at the loss of a head of hair, than we have been at the sudden revival of our supposed case of apoplexy. Whilst, on the other hand, we have admitted a case as one of "dead drunk," perfectly inanimate, and have, for the sake of precaution, sent him into the ward to bed, and yet have found it to prove an instance of apoplexy. I have, however, learned a valuable lesson by even these difficulties: for in every instance of late years, when a case of complete insensibility is admitted, I have requested the house-surgeon to empty, and then wash out, the stomach by means of the pump; and, if it has been from drunkenness, the "sot" has shown his character up before we have finished this operation; and if it has been one of apoplexy, it has done no harm, and it has proved that it was more than intoxication, as no alcoholic fœtor has been detected in the contents of the stomach.

A ludicrous instance, amongst many, occurred of this kind a few years ago. A female was brought into the hospital at midnight by the police; she was found senseless in the street. She breathed heavily, and we could get no rational answer to all our interrogations, pinchings, or attempts to rouse her. On looking at the pupils, we found one somewhat dilated, and the other, I think the left, contracted to a pinhole in size. We readily, therefore, judged it to be "sanguineous effusion into the thalamus opticus of the opposite side," and, therefore, requested the house-surgeon would bleed her from the arm; this, however, failed, as no blood could be obtained from a set of small deep-seated veins; the jugular, I believe, was also ineffectually opened, and at last the right temporal artery, when eight ounces of blood were taken away. The head was shaved; she was made to swallow, with some difficulty, a dose of calomel and black draught, and a turpentine enema was afterwards administered. We all retired to bed after talking over the features of this striking case of apoplexy. On the arrival of the physician for the week (Dr. Watson), I related to that gentleman the circumstance of having admitted a severe case of apoplexy, and, as I had just previously made my daily visits round the wards, and had found her still insensible, I was perfectly unprepared for the scene that followed. That gentleman went up to the bed of the patient, and, without saying anything to her, merely lifted up the closed eyelids and remarked to the pupils around him that the iris was very contracted, whilst another gentleman, a physician, exclaimed, "*C'est un homme!*" and the patient, in the most composed and easy manner possible, calmly said, "I haven't had the sight of that eye, Sir, these twenty years," and, as if awaking out of a deep sleep, began to feel herself, and, finding out her situation, became quite communicative, to the great amusement of the gentlemen present, but to my utter astonishment. She informed us that she was "a professional singer," that is, she sang ballads in the streets; and, "having been treated to liquor, she took more than she was able to bear," &c. It should be observed that there was an old adherent iris on one side, which had helped to fix it in our minds as a case of apoplexy.

I am frequently called by the house-surgeon to cases of apparent concussion; a blow has been given over some part of the head and face, the patient has reeled and fallen; no evidence can probably be obtained of previous

intoxication, only that the parties had been drinking and quarrelling. The man or woman, as the case may be, looks apoplectic, and is admitted under the strongest suspicion that recent effusion has taken place in the brain. The wound is bleeding freely; it is sponged, probed, brought together (perhaps by sutures, if jagged), and strapping; yet he sits unconscious. No stomach-pump is used, and he is sent to the accident ward. The following morning we hear, to our surprise, that the patient is up, dressed, and insists upon going out to his work; and attends, as an out-patient, for some days afterwards, until the wound is healed.

Yet, again, the very reverse of these facts is constantly occurring in the surgical department of this hospital. A man, a few days ago, only, fell from the seventh or eighth prong of a ladder, and struck his eyebrow on the pavement. When he presented himself there was a small wound, with ecchymosis over the eye, but his manner did not raise the slightest suspicion of intoxication, of concussion, or of cerebral distress. Indeed, so trivial were the symptoms, that the house-surgeon most reasonably doubted on the necessity of detaining him in the hospital. However, as a fellow-workman came forward and stated that the man had been stunned for a few minutes after the fall, it was deemed advisable to send him into the ward. In twenty-four hours I was summoned by the house-surgeon to see this man, who had been suddenly deprived of the power of speech, and in twenty-four hours more he was dead. The blow had produced "fracture of the cribriform plate of the ethmoidal bone, and the adjoining parts of the frontal bones; the fracture extended backwards through the anterior part of the sphenoid to its body. On reflecting the skin covering the root of the nose, the ossa nasi were found broken across at the upper part; and on pushing the nose upwards, the movement was communicated through the septum to the fractured cribriform plate." There was, also, acute arachnitis, the result of these injuries.

The above account of the *post-mortem* appearances of this case is taken from an interesting and practically-useful paper published by our late house-surgeon, Mr. Rogers. This gentleman has had many opportunities of verifying the above observations on the difficulties that attend the accurate diagnosis of cerebral lesion, from mere cerebral excitement and disturbance. There is a group of four cases related in the article alluded to, of fracture of the nasal bones in the short space of three months, three of which were fatal; and in one of these three Mr. Rogers observes, that the apparent injury done to the nose was so slight as to escape detection during life; whilst in the other case, the only one which survived the injury, the accident was followed by no symptoms indicative of internal injury; and although the bony supports of the nose were so extensively fractured, yet was there but little displacement.

In all cases of intoxication the mental faculties become roused before the operation of thoroughly washing out the stomach by the pump is concluded; whilst, on the other hand, it may be said, the reverse is ordinarily the case in cerebral lesions, or in mere concussions of the brain. Before we allow the tube to be withdrawn from the stomach, in cases of inebriety, we usually inject three ounces of the dilute acetate of ammonia draught, which has an extraordinary effect, sometimes in "sobering" the head, and calming the stomach too.

Dram-drinkers and females of an anæmic constitution are particularly liable to sudden attacks of *SYNCOPE* from hemorrhage into the stomach: in the former class of persons this effusion is the result of a congested state of the venous trunks of the stomach and duodenum; but in the latter class it is not always so, but rather the result of some real disease, as ulceration of the coats of the stomach in its arch. Active purgation by calomel, colocynth, and black draught is the safest mode of treatment in the first class of patients; whilst turpentine, steel, and a due supply of nourishing animal broths are most judicious in the anæmic class of females.

With regard to *FACIAL PARALYSIS* little need be said, as the disease speaks for itself. But this only I am anxious to notice, that of all the recent discoveries in the practice of medicine, the application of the *lin. croc. Tiglii* is a most efficacious remedy, applied with a camel's-hair brush along the course of the seventh nerve, as it emerges from the skull. The pustular eruption and irritation which it produces are rapid, evanescent, and readily controlled. The effect has been surprising in some instances, but, at the same time, active purgation has been kept up by metallic and drastic purgatives. This treatment was first suggested to my mind by witnessing the astonishing influence of this counter-irritation, in other diseases.

I have briefly alluded, elsewhere, to the practice which we invariably adopt at this hospital in the administration

of the stomach-pump to all cases of insensibility, when this symptom depends upon causes of an equivocal nature. The evidence, in such instances, which we derive from those who bring the patient, is oftentimes of a most perplexing and negative character, so that it is difficult to determine whether the senseless condition of the person depends upon sanguineous apoplexy, narcotic poisoning, urea in the circulation, hysteria, or intoxication. I am aware that it is much easier to recommend the employment of the stomach-pump, than to administer it to persons, who are sometimes in the highest state of excitement bordering upon maniacal fury. I may, therefore, describe the mode in which we employ this remedial agent in such cases, for until I arrived at this practical method, we were often obliged to abandon the use of the pump, in consequence of the difficulties which the struggles and powerful action of the patient's body afforded; and I may here remark that, on one occasion, the gag was forced from the mouth, and the man bit the tube in twain, a few inches from the cylinder, leaving the remainder, nearly two feet in length, in his œsophagus and stomach, when, by the greatest manual force, I wrenched open his jaws and plunged my fingers down his throat, and was fortunate enough to seize the divided end, at the points of my finger and thumb, just as it had slipped within the bag of the pharynx. Since that period I adopt the following method:—The patient is seated in a strong wooden chair, another chair is placed behind him, and an attendant is ordered to sit in it, and, taking the arms of the patient, he pinions them, by holding the wrists firmly against the back of the chair. This method serves to fasten the trunk securely in the chair; the legs are then swung in a jack-towel, which is passed round the ankles by a noose, and, a second chair being placed, so that the back of it shall be towards the legs of the patient, another attendant is placed in it; he carries the towel over the back of the chair, and sits upon it, and thus the legs are at right angles with the trunk, and consequently, they are almost powerless. If, however, the man offers to flex the knees, the ankles are instantly raised higher, and the power of the flexors of the thigh is thereby overcome in an instant. By this position, it will be observed, the patient is deprived of all muscular power, and the only fixed point on which his body rests is the ischiadic tubera. I am satisfied that the stomach-tube may not only be introduced with comparative ease, but that the operation of the pump is perfectly harmless, when judiciously administered, upon a refractory patient thus immovably fixed.

When I adverted to the physiognomical characters of cerebral lesion, I observed that insensibility, closed eyes, and unequal irides were usually amongst the prominent features in this department of pathology; but we have just been describing a series of cases in which the symptoms so closely resemble each other, that unless a few practical hints are now made, in order to illustrate the actual differences which exist between cerebral disease in its varied symptoms, and cerebral asphyxia in its usual appearances, I am afraid that the student may not be enabled to discriminate the pathological features peculiar to the two maladies.

Cerebral asphyxia, whether it arise from narcotism by the presence of opium, urea, or alcohol in the system, invariably presents the following characteristic features, namely—stupor, closed eyes, equal irides, but *no* paralysis. In narcotic poisoning by laudanum, the stupor is not always so complete, but that the individual may be somewhat roused by means of flagellation, pinching, &c., but especially by the agency of the electro-galvanic battery; the eyes are closed, it is true, but the irides are minutely contracted, the cornea is dull and no longer glistening, the whole organ is void of expression, and the countenance presents a dingy, livid appearance: the respirations are slow, shallow, and spasmodically performed, whilst the heart is also laboured, and the pulse slow and unequal.

On the other hand, the narcotism produced by urea in the circulation is of the most obstinate character; no agents are capable of rousing the patient, even momentarily, out of it; though the eyes are closed, yet the pupils and cornea are natural in appearance, however the iris, towards the close of the disease, may become contracted. The countenance does not present the features of a person under the influence of opium, but it is scarcely altered, except in its partaking of an anæmic cast. The respirations are equal, free, and regular, but somewhat stertorous; the pulse is above the natural standard, and there may be some œdema of the body.

But when we examine the physiognomy of a man insensible from alcohol, we notice the complete stupor, it is true, but the closed eyes are no sooner raised, than we detect the red and ferreted conjunctiva, the fiery cornea, the dilated irides, and we feel the rapid full pulse, and we may smell the strong fumes of alcohol in his breath.

These circumstances are of the highest practical utility, and ought to be carefully borne in view; though, in

private, the practitioner is more or less acquainted with some circumstantial evidence by which he can judge of the nature of such equivocal symptoms, as he has, in all probability, been in attendance upon the family for years; but the hospital practitioner rarely possesses such means of arriving at a correct diagnosis of these cases. The patients are brought here in a state of insensibility; the friends are unknown and absent; the attendants, who accompany them, are unable to afford us any assistance in forming a diagnosis, and, too frequently, they think they have done enough if they have succeeded in depositing the narcotized patient in our care, and they accordingly decamp soon afterwards. Thus we have to watch, to discriminate, to weigh well, and to ponder over the varied phases of symptoms which such cases present; but the effect of this arduous line of practice is to tutor our minds to seize the most prominent yet peculiar symptoms of each of these cerebral diseases, or cerebral alienations.

CLASS I.

Division III. *Cerebral Sympathies in Irrationality; Countenance distressed.*

From Delirium tremens.

- „ in fever.
- „ in pneumonia.
- „ in pericarditis.
- „ in enteritis.
- „ in hysteria.

From Delirium in mania.

- „ in epilepsy.
- „ in chorea.
- Paralysis agitans.
- Paralysis e veneno.

DELIRIUM TREMENS.

This is a disorder peculiar to drunkards; it usually creeps on when they are deprived of their accustomed stimulus; but I have repeatedly noticed that men who are in the habit of drinking freely, and who at the same time eat largely of animal food, twice or even three times a day, rarely become the subjects of this disease; but if they fall off in their appetite for this kind of food, and still continue to take their usual quantum of beverage, bilious diarrhœa, perhaps, supervenes; they become disordered, dose themselves with salts, &c., and perhaps get bled, and the disease soon sets in with its usual fierceness of excitement. Such is the case with the brewers' draymen and porters, potmen, &c., in London, amongst which class of persons the greatest number of these cases occur. Such is the fact, at least, with the idiopathic form of this disease; but the traumatic character occurs in the surgical wards continually; and even here, it may be observed, that if a drayman is brought in with a fractured thigh, and is able to continue to eat his accustomed quantity of animal food, with a fair allowance of porter, &c., he is most likely to escape the disease altogether. There is, at this moment, a man in the accident ward, from one of the largest breweries, with severe laceration of the leg, and who has been allowed by Mr. Arnott, five pints daily of the very best porter, and which is certainly equivalent to a gallon of the publicans' liquor in point of strength, and he has also been allowed full meat diet, extra bread, &c., and has hitherto escaped all symptoms of the disease.

These men, generally speaking, are rationed at a gallon per diem when in full work, and they usually drink, at least, another half gallon in their rounds delivering the beer to the different public-houses, where they are entitled, as they think, though it is only a custom in the trade, to have a pint of porter each, and some bread and cheese. They are not, however, habitual spirit-drinkers, and, considering the work that they do, and the temptations that lie in their way, they are as abstemious, in comparison, in dram-drinking as they are excessive in porter-drinking.

In the east part of London, and along the Thames, this disease is more frequently seen amongst the coal-whippers and bargemen, who drink even more than the draymen of the west-end; but, as they obtain their liquor wholly from the public-house, which is of an inferior quality, and not from the firm direct, as is the case with the latter class of men, it may be calculated that they swallow the same amount of alcohol in both instances*.

It should be observed that every case of threatening delirium tremens is preceded by more or less biliary derangement; and as these men rarely enjoy active or healthy secretions from their alimentary canal, it does appear from the observations of a large number of cases, that the disease is purely hepatic in its origin. This opinion is also entertained by a few eminent men, and one physician of this hospital has most successfully treated some of the worst cases of this disorder with large and repeated doses of calomel, followed by brisk cathartics; and he has never been obliged to resort to opium at all, sleep having succeeded the active unloading of the hepatic system. It has long since struck my mind that the invasion of the disease springs from a sudden, or, it may be, a gradual poisoning of the blood, by means of a chemical alteration in the bile and urine; and that some of the elements of one or both of these secretions are carried through the circulation. My chief reasons for drawing these conclusions are the following: Since I have had an opportunity of watching the practice now alluded to, the disease has given way, in a most decided manner, under sharp purgation with calomel, &c.; and the improvement is invariably coexistent with the passage of numerous dark, offensive, and deeply-bilious evacuations. The onset of the disease is ushered in with loss of appetite, foul tongue, giddiness, nausea; and in an effort to throw off some of the morbid cystic bile, sickness and bilious diarrhœa may set in also. Again, a very large number of cases, and those of the worst form, present themselves with symptoms of poison by urea. It is stated that they have had one or more fits; these fits are distinctly epileptic, and exactly resemble those attacks which sometimes occur in persons labouring under albuminous disease of the kidney, and in whom the disappearance of urea from the urine, and its presence in the circulating fluids, has been repeatedly detected by Dr. Christison and others. In fatal cases of delirium tremens an epileptic fit is often the forerunner of death.

However, I will portray an instance of this disease now before us. He is a bony, muscular, and well-formed man, between twenty-five and forty-five years of age: for it rarely occurs antecedent or subsequent to these periods of life. His countenance is bathed in a dirty sweat; his eyes are fierce, bold, and fiery, but the brows and eyelids droop somewhat, and the former are knitted. The angles of the mouth, whilst he is quiet, are slightly drawn downwards, the *alæ nasi* distended, and the pupils are small; the cornea is dusky; the mouth is parched, and the lips are dry and peeling. There is a sharp, knowing look about him, very significant of the disease, and he darts his eyes in all directions; and the moment a word is spoken he has fifty more to answer with. His loquacity is most striking, and the sharp, quick manner of answering all your questions is equally peculiar to this disease. When you get him into bed, and are in the act of putting his trousers aside, they are seized with a sudden earnestness, and he fumbles in the pockets for some supposed paper, bill, or money; the bedclothes are rolled up, the sheets made into ropes, and he tugs and pulls away at them, hallooing out to his companions, whom he supposes present, to come and assist him in pulling up this barrel, or hoisting this quarter of beef, as his occupation of drayman or butcher, &c., may have been. Whilst the men in the "public line," so called, (a genteel phrase for "potboys,") keep up an incessant conversation with their masters, mistresses, and the various customers:—"I say, Jim, look after that half-and-half just gone out; she has given me a bad shilling."—"Pray, sir, what are you doing below there, in the cellar? Come up, you young rascal."—"Sally! Sally! Sally! you fool, why don't you come when you

* Dr. Minianowsky, Professor of Medicine in the Imperial College of St. Petersburg, visited this hospital last week, and expressed his surprise, on my informing him, that this disease is oftentimes brought on by the excessive drinking of porter only; whilst in the Russian capital, and in Moscow, the malady is only known as the result of the abuse of ardent spirits, for malt liquor is scarcely to be obtained throughout that country. In the latter class of cases, I am not prepared to advocate the same form of treatment as is recommended in the foregoing remarks, since it rarely happens that this disease is met with in the metropolis as an effect of ardent spirits alone; and the patients are usually gross, full-blooded, and rather corpulent in stature; whilst the emaciated, thin-blooded, sallow dram-drinker may possibly require to be treated wholly by sedatives, &c.

are called? here are two half quarters of gin waiting at the bar." In the midst of this noisy talk and bath of perspiration, the physician enters; he suddenly turns off to him, and, recognising him as a gentleman, will address him as such, thus:—"How do you do, sir; I believe you are Mr. Simpson, I hope you will be so good as to give my kind regards to Mr. So-and-so;" and then, turning to the keeper, will abruptly address him:—"Why don't you cut this string, you fool? pull out your knife, I tell you, and cut these ropes;" meaning the straps with which he is fastened down in bed; and again turning off to the gentleman:—"I believe, sir, you advertised for a livery servant last week, in the *Times*. I read your advertisement, and was fully intending to wait upon you, in the course of this morning, but Mr. Green persuaded me to go up in his balloon, and in descending we struck against St. Martin's Church, and I fell on the curbstone and received this blow over my eye, and got this sore (putting his hand to a blister on the forehead, placed there some hours before); and, therefore, I could not appear before you in such a figure as this. What wages, sir, pray do you give, may I be allowed to ask?" &c. &c.

Now, I think, the main feature of this delirium lies in the following observation, which I have invariably made in this disease. There are always hallucinations of a pleasing or of an horrifying nature; but in the midst of the greatest loquacity you may stop him, by suddenly accosting him thus:—"Put out your tongue; where do you live?" &c.: and thus you may sit at his bedside, and keep up a tolerably connected gossip for a quarter of an hour, if you will not bother him with too many questions at once, but allow him to make his own running comments upon the questions which you put to him.

There can be no difficulty, one would have thought, in recognising this disease, and yet the instances are not few where the patient has been bled, lowered, and treated as a case of phrenitis, and has thus been hurried into eternity at the shrine of gross ignorance. The following is an example of this malpraxis:—

Thomas Martin, aged forty-three, a short, bulky man, a coalwhipper, admitted July 14th, in a state of great agitation; tremors of the whole body, which is bathed in perspiration; countenance fierce, dingy, and covered with sweat; eyes wild, and reddish, with occasional knitting of the brows, expressive of mental anguish. He gives a correct account of his feelings and history, and corroborates the statement of his companions who brought him. Pulse quick and small; tongue furred; no sleep. It is reported that whilst he was at work yesterday, he was suddenly seized with general tremors, giddiness, and pain of the head. He walked to an hospital with some difficulty, and was immediately bled to sixteen ounces. For some nights past he has been restless and watchful. He has been in the West Indies, and there he addicted himself to drinking large quantities of rum. Has had a similar attack before. He was allowed one-third of a pint of port wine, a pint of porter, full meat diet daily, and took one-third of a grain of morphia in camphor julep every six hours. A blister was applied to the neck, and a black draught given immediately.

On the 25th, five A.M., the following summary of notes may be given:—

Perfectly unmanageable, requiring restraint; talking and swearing horribly to persons not present; countenance much sunk and altered; bathed in perspiration; his whole muscular frame in constant agitation and strong action; pulse 120, feeble. Rum, milk, and eggs, every hour. Tr. opii. ʒ jss. every four hours. Heart's action devoid of impulse or sound.

At one P.M. this day, after a short interval of comparative quietude, he had an accession of all his furious symptoms, and died suddenly in a few minutes afterwards, in a paroxysm of rage and exertion, uttering the most horrid blasphemous language.

It is computed, says the note in the case-book, that he took nine drachms of laudanum in sixteen hours, without producing the slightest narcotic influence.

On another occasion, the servant from a livery-stable-keeper in Bond-street was with us, and exhibited the most extraordinary activity, excitement, and mental as well as bodily ardour, in the attempt, which he was supposed to be executing, to drive his master's four-in-hand thoroughbred horses from the stables into the city. He held the reins (so to speak) in his hand, and, with the whip in the other, he mounted the box and started off up the stable-yard, on getting out of which into the street, the off leader, "a high-spirited creature, full of play and of blood," as he described her, made a shy at something, and nearly drove the coach against the wall; at this he became most

eager and excited, explaining matters with the master, who was witnessing the exit of the coach from the yard, as we gathered from his quaint remarks; he continued to halloo at the horses, coaxing one, talking kindly to another, and swearing at the off leader. His actions, in his supposed driving; his rapid observations, as he passed down one street into another, his remarks upon the beautiful team, his jokes, his extreme mental anguish to get on and keep all safe, exceeded every thing that I ever witnessed before or since. You might follow him in every street he went along, by his shrewd remarks and singular conversation; but all his dread on entering the city seemed to arise from the idea that he should not get the "off leader" to stand the noise of St. Paul's Churchyard*.

However, he turned into the yard, as he expressed it, and had not gone a very great distance, when it was evident by his gestures, increased excitement, and his language, that the leader of "high mettle" had shied at something, and in another moment he was against the curbstone, and the beautiful creature was sprawling on the pavement. The agony, the sweat, the vociferating language, the agitation, the horror, the busy, eager, and fierce glare of his eye and face, the shock, in fact, which this dreaded calamity produced upon his excited and incoherent mind was too powerful, and he never had a tranquil moment after it. The poor fellow sunk in a few hours more, from mere exhaustion of the vital powers.

Post-mortem Examination Twenty-four hours after Death.—*Head.* Scalp, cranium, and dura mater tinged with blood, which issued copiously when these parts were respectively divided. The arachnoid, generally speaking, puckered from thin, clear fluid, which was effused beneath it and the pia mater. There was an ounce of serum in each ventricle. The substance of the brain was rather more injected than usual, and the convolutions were small.—*Chest.* The heart was pale and flabby, and softened in its walls. In its cavities, instead of the usual accumulation of coagula and fibrine, there was a fluid more resembling curds and whey, deeply tinged with blood.

This "soft, doughy, inelastic, unresisting heart," which Mr. Paget describes †, as though it seemed never to have been in the state of *rigor mortis*, is precisely analogous to the condition of the heart noticed by myself in the year 1832, and a description of which has since been published by me, as well as by a former house-surgeon of this hospital. But I was not then aware that such morbid features in this organ depended upon a granular degeneration or fatty deposition, within the muscular fibres of the heart itself, until I had the gratification of perusing Mr. Paget's instructive lectures; and they well deserve the attention of every practitioner. But in the disease now under our notice, Mr. Paget has observed, that it is not connected with general fatness of the body. The deposition of fat is not seen along the furrows where the coronary vessels lie, and where fat is ordinarily met with in otherwise fat people; "it is not the result of an encroachment of the natural fat of the heart upon the fibres themselves, although it sometimes, yet I think seldom, exists together with increase of the external fat of the heart. Its chief seat, near the inner walls of the heart's cavities, and on the fleshy columns, where is little or no fat in the natural state, would prove this; and the microscopic examination leaves no doubt, for you may not find more than the usual quantity of fat outside the fibres." "Neither is it at all necessarily connected with general fatness of the body." But these changes are seen then on the *inner* portions of the muscle and beneath the endocardium, and the fibres are supplanted by these fatty degenerations, giving to the organ a "tawny buff or ochre-yellow hue," and the whole viscus presents a general paleness and flabbiness of texture, such as I have already observed to occur in fatal cases of delirium tremens.

I am inclined to think that subsequent pathological researches will shortly unveil to us the fact, that this "granular degeneration," described by Mr. Paget, is especially brought on by the constant abuse of alcoholic drinks; and that any large amount of narcotism forced upon such a system, whilst labouring under delirium tremens, will be often followed by a false sleep. I say false sleep, because I have witnessed several instances where opium has been administered in large doses, and sleep has truly been induced, but it has been the sleep of death. The patients have continued dozing for eight or twelve hours, and have then been carried off, either by an epileptic fit or

* This space is so very large that the reverberation of sound produces a striking contrast to the incessant din that goes on in other parts of the City. This must have been the ground of his fear.

† Lectures on "Nutrition, Hypertrophy, and Atrophy," by Professor Paget. 1847.

by a sudden arrest in the heart's action; and in all such cases, this organ has presented the exact dough-like, inelastic, pale, and flabby condition already described.

The extraordinary effect of cold affusion in delirium tremens has not, that I am aware of, been alluded to by writers upon the subject. There have been several instances in this hospital in which continued sleeplessness, violent excitement, profuse perspirations, contracted pupil, and rapid exhaustion have attended the exhibition of even larger doses of opium or morphia than were administered in the preceding case, and yet, with such unfavourable symptoms, the cold affusion, freely used, has induced calm and protracted sleep, with ultimate recovery.

Robert Pyper, Esq., surgeon in the 11th Hussars, and my late colleague in this hospital, informs me that whenever the men have been indulging too freely in liquor, and that the well-marked symptoms of approaching delirium tremens manifest themselves, he orders the hospital sergeant and another man to mount a table or ladder, place the patient in a tub below them, and pour, from this height, a continuous stream of cold water upon the head and chest of the offender until he is calmed down; he is then rubbed dry with a rough towel, placed in bed between warm blankets, and almost invariably falls into a deep sleep of many hours' duration, and awakes perfectly collected and well. We were induced to adopt this practice many years ago, in consequence of our utter inability to confine a strong, muscular fellow, whose fearful excitement, pugnacity, and rebellious obstinacy to take any medicine or food set all our attempts to control him, or to induce sleep, at utter defiance. The house-surgeon and myself placed a chair on each side of his bed-head, with a pail of cold water upon each chair. A man sat on each side of his body, and held his head and chest down, so as to prevent him rising up in bed. Two more persons supplied us, respectively, from the pails, with pints of cold water, and we alternately poured it in a small stream upon his forehead, face, and chest; the more he bellowed, the more fluid he gulped; he struggled for breath, and, again recovering his respiratory powers, halloed and roared, "Murder! police! murder! police!" but so much the more did he get of cold water down his throat. We saw it was a desperate case, and called for a desperate remedy, if such it may be styled. We persevered, and so did he; but at length he choked, he gulped; the respiratory system became paralyzed, so to speak, or, at least, tranquillized; he whined, spoke mildly about our cruel treatment, inquired how long we were going on with that sort of work, promised to be quiet if we would leave off; and at length sued for pity, and entreated us to give over, as he had had enough. We instantly desisted, drew away the wet clothes, rubbed him dry, had some hot blankets ready at hand, covered him up, and he fell asleep, and continued in a sound doze for thirteen hours, and awoke perfectly well, but unconscious of all that had passed, only that he had dreamt he had been out in a pelting storm!

When this disease becomes so perfectly uncontrollable, whether by failure in the remedies administered, or by the obstinacy and refusal of the patient to take any kind of food or medicine, it may then be regarded in the light of mania, rather than in that of simple delirium tremens. We have no resource but in some such powerful agent as that of cold affusion; and the instances where it has proved of striking efficacy are not few.

It is needful, however, to advert once more to the fact, that a large proportion of the cases of this disease which have been admitted into the medical wards during the last two or three years, have been most successfully treated by full doses of calomel and aperients, whilst opium, as a narcotic, has been almost wholly abandoned; and whenever the former drug has acted briskly upon the hepatic circulation, and has brought away, for several days successively, a large amount of chocolate-coloured, offensive bile, the hallucinations have disappeared, tranquil and refreshing rest has followed, and convalescence has rapidly succeeded. But, although the authority of so eminent a physician as Dr. Watson is directly contrary to this practice, yet it is impossible to have witnessed the gratifying results of the purgative treatment without being fully convinced that this course of practice is both safer, and is based upon pathological principles more consistent, than is the treatment of drugging a semi-maniac, who is already poisoned by morbid secretions, with another narcotic, the action of which tends directly to check the separation of those morbid agents from the system which light up the disease. The following instance illustrates this plan of treatment.

William Kellarly, aged thirty, tailor, admitted April 20. Countenance wild and anxious; walked to the hospital, and stated that he could not rest for several days past, in consequence of being "nervous" at night. On

more minute inquiry, however, he acknowledged reluctantly* that he had all sorts of visions, that rats and mice ran over his bed, and prevented him getting sleep. There was slight tremor of the hands, but no violence in his manner. He was immediately ordered five grains of calomel with one of opium, and a compound senna draught six hours afterwards. He passed the first night in a very disturbed and noisy manner; he was, however, tractable, and did not require any restraint. His hallucinations were chiefly about his work, and he was talking and calling to his various comrades. The following day the bowels began to act, and were kept open by a further purgative draught. The evacuations were abominably offensive, of a deep mahogany colour, and contained a large quantity of morbid cystic bile. The dose was again repeated, and the same results followed; but the secretions gradually presented a more healthy aspect, and did not emit such a fetid, unnatural odour. The patient slept at intervals refreshingly, and was convalescent in a fortnight. Purgation was still kept up two or three times a week, by a grain of calomel and nine of compound extract of colocynth; his appetite returned keen, and his countenance assumed a lively animation, which was not seen on his admission. The same results followed, in a case since treated precisely in the same manner.

William Seagur, thirty, a potboy, admitted May 12, who acknowledged that he drank a gallon of beer a day, and four or six glasses of gin. He was a short, thick, fat, and bloated fellow, with a wild, fierce eye, horrid hallucinations, and had passed five or six nights without a "wink of sleep." But the chief peculiarity about this man's case was, that the disease was ushered in with tinnitus aurium, vertigo, temporary loss of consciousness, in short, with those sudden symptoms which are classed amongst the "precursors" of apoplexy. Doubtless many practitioners would have depleted him largely, under the belief that such a disease was about to set in; but it can be no matter of question with us, that, if such a treatment had been adopted (as is, alas! too often the case), the patient would have suffered from a severe attack of delirium tremens, and his constitution would have probably sunk under the attack; whereas, the purgative treatment by calomel, colocynth, and black draught was sedulously followed up, and, although it proved a more obstinate case than the former, yet he left the hospital in three weeks after his admission perfectly convalescent. It is but just, however, to add, that after a few days' severe purgation, he was allowed a quarter of a grain of morphia at night, in consequence of the irritable, nervous state in which the treatment had left him. The hallucinations vanished as the alvine secretions presented a healthy aspect.

DELIRIUM IN FEVER.

It occasionally happens that a poor fellow is brought here by some friends or lodgers from a low and dirty neighbourhood, who have found him so destitute, ill, and filthy, that they have willingly defrayed the expenses of his carriage here, in order to get "the fever" out of the house. They know nothing of his history, or of the symptoms and duration of his illness; that difficulty is left for us to surmount. The patient is insensible; the countenance stupid and dusky; the pupils dilated; the eyes closed; the skin hot; and the pulse rapid. Who can pronounce an accurate diagnosis in such an emergency, so as to lay down a distinct line of treatment?

He is placed in a warm bath and well washed, his head is shaved, and he then has a clean pair of sheets and a freely-ventilated ward to breathe in. A dose of calomel with some purgative is administered, and cold lotion is applied to the shaved head; he is made to swallow a little beef-tea from time to time, and thus he passes the first twenty-four hours, perhaps. The disease now begins to develop itself. Delirium, more or less severe, sets in, with intervals of rationality; the tongue is seen to be transversely fissured, red, and raw; the eyes become flushed; the pulse regains some strength; sordes appear about the lips; the skin is sprinkled with a few papular eruptions, and we soon are enabled to decide that it is "simple continued fever," accompanied with severe head symptoms; and thus the case progresses favourably under very mild treatment, good nursing, and watchfulness, without any severe measures on our parts †.

* There is a remarkable shyness in patients afflicted with this disease to relate to a practitioner the hallucinations under which they labour; and unless you put "leading questions" to them, and inquire if they fancy that their fellow-workmen talk to them at night, or if they think they see and hear cats, monkeys, bears, &c., about the room, they are very backward to acknowledge it.

† I have remarked that when convalescence is set in from fever, the patient not only lies on his side, but will always proffer the hand on which he lies, when you ask to feel his pulse, rather than the one which is at liberty. This symptom denotes extreme prostration of strength.

Whereas, I regret to state, that many are the instances where the same condition has existed, and a medical man has been called in (a novice in the treatment of the low form of fever of London and other large towns), and has thought proper to tie up his patient's arm, take away a pint or more of blood, and then send him to the hospital, without, perhaps, prescribing a grain of medicine; and I need not add that such cases have usually terminated fatally in a few days. The bleeding, as we have been subsequently told, was performed on account of the cerebral symptoms, but the patient having no one to nurse him, it was deemed more prudent to send him to an hospital. Alas! I would there were but a few of such sad instances of malpractice. Let the following serve as a sample:—

Christiana Smith, aged eighteen, a servant, admitted Aug. 8th. Countenance wild and flushed; eyes projecting and suffused; lips dry and covered with a viscid mucus; head very hot, as is also the whole body, which is covered with a rubeloid eruption; occasionally screaming and talking incoherently, but answers all our questions in a rational manner; pulse 120, and very feeble, undulating; tongue ruddy and dry in the centre; abdomen full, but bears pressure; bowels relaxed; does not acknowledge that she is in any pain. This attack set in six days ago, with rigors and heats alternating; and a doctor was called in, who bled her to thirty ounces, and in a few days afterwards sent her to the hospital. Surely I need scarcely inform my readers that the poor girl lingered on and sunk in a few days more.

DELIRIUM IN PNEUMONIA.

There is no form of disease to which the human frame is liable, in the investigation of which, the valuable aid of auscultation is more manifest, more satisfactory, and more instructive, than in pneumonia. There is no form of inflammation either, which, if improperly treated at the onset, or overlooked in its progress, is so destructive of life, and so rapid in its various stages as that of pneumonia. A clear and accurate diagnosis is of the utmost importance here. A few hours lost will oftentimes bring the patient into the jaws of death. If there was no other consideration why auscultation should be publicly taught in the schools, the rapid progress of this fearful disease, and the deceitful symptoms that it often presents are sufficient grounds for earnestly pressing upon pupils the importance of the study of this branch of medical practice.

I cannot instance my remarks better than by describing a case amongst many that have occurred here. A well-formed German baker, John Trenter, aged twenty-six, was admitted as a case of fever, November 30th, as the medical man so termed it; and as he was delirious, and they had no means of keeping watch over him, he was accordingly sent to us. When we had got him fairly into bed, which was done with no small difficulty, I observed his face was flushed; conjunctivæ injected; a wild, anxious, but inexpressive eye; some delineation of uneasiness in the contraction of the features; skin hot; pulse full, but oppressed. We ordered his head to be shaved, and cold lotion was applied to the forehead; but I was soon summoned to the ward, for the nurse had no power over him; he was jumping over the beds like an excited patient with delirium tremens. There was no cough and no expectoration. I got him to bed with firm language and an authoritative tone, and immediately strapped him down; he looked like a man, at this period, with phrenitis, and I was loth to bleed him from the head, knowing, by experience, how ill bakers and such like artisans endure lowering by blood-letting, &c. Still our minds were set upon the supposition of its being fever, with severe cerebral congestion. We left him for the night, and, on the following morning, when I made my usual visit, the man was more tranquil, though he had had but little sleep. As I stood questioning him as to his symptoms, he suddenly was stopped by a tight and harsh, but short, cough. Immediately I set him up in bed, and, on putting my ear over the chest behind, found extensive bronchophony; tubular, or bronchial breathing, very general; small crepitation, and total dulness on percussion. Now, the whole case was made clear to my mind. "Acute pneumonia, which had run into the second stage of red hepatization," and the whole lung was in a fair way of being solidified, probably to the patient's destruction. I tied up his arm; the pulse was weak, but then it was so from oppression, carbonized blood circulating to such an extent that his system was, it may be said, poisoned with it. I allowed the blood to flow *pleno rivo*; the pulse rose, and when he had lost thirty ounces he fell flat on his back, burst out into a profuse sweat, and there I left him. Soon afterwards

he took half a grain of tartar emetic, and continued it every half hour until he was thoroughly nauseated, and then he continued it at longer intervals, with three grains of calomel. He was cupped freely over the inflamed lung; and in one week the patient was convalescing, the lung rapidly regained its permeability, and vesicular breathing was heard throughout it before he left the hospital to resume his work.

The occurrence of pneumonia under such insidious train of symptoms, renders it imperative on the practitioner that, in every case of fever, with or without delirium, the chest should be submitted to a careful auscultation, since the instances are by no means few, where fever has been allowed to run its course, and the fruits of undetected and fatal pneumonia have only been developed in the *post-mortem* examination of the body.

But in making these observations, it is of the greatest moment that we should always bear in mind, that pneumonia setting in as a distinct idiopathic disease, ushered on by severe rigors and intense heats, alternating; and that form of intercurrent pneumonia which springs up in the course of common continued fever, are two diseases, for the treatment of which the most important distinction should be ever made. Thus, "pneumonia with fever" is not the same disease as "fever with intercurrent pneumonia," at least, the treatment which in the former is the only judicious mode of practice, and which alone can be authorized, would be certain death, if pursued in the latter, if I may thus strongly express myself.

But there is an excellent guide for the student in the following remarks, which in the general will be found tolerably accurate. If the patient's attack has been ushered in with one severe and protracted rigor, and illness has prostrated him immediately afterwards, with feverishness, &c. &c., inflammation may be suspected to have lighted itself up in some vital organ. If, on the other hand, the rigor has been short, frequently repeated, at longer or shorter intervals, the system may be suspected to be labouring under an attack of continued fever. So that it may be affirmed, that severe inflammation of vital organs is ushered in with one or two severe rigors, succeeded by intense heat, &c. whilst ordinary fever, or derangement of the whole system, is preceded by frequent heats and chills, alternating throughout the day and night, for many hours, before prostration of the body is experienced.

The physiognomy of such cases as those I have now related is sometimes very marked. In delirium from fever there is a dusky, heavy, and expressionless countenance; the eyes are half closed, and, as the patient lies in bed, he rarely lifts his lids upward, so as to look at the individual who is interrogating him about his sufferings. Whilst in the severer form of delirium from pneumonia, there may be flushed eye and face, and, what I have so frequently noticed in London, an herpetic eruption over the lips; an excited manner, but a dulness in comprehending your questions; and you find a difficulty in obtaining clear or satisfactory answers to your inquiries about his sufferings, history, &c.

I am anxious to present to the minds of my readers a distinct group of instances of cerebral disturbance, arising from acute disease in other organs, in as concise a manner as possible, in order that the assimilative characters of these diseases may be fully estimated, whilst the observing eye of a practical man will readily notice the various phases of these characters as they are severally laid before him.

DELIRIUM FROM PERICARDITIS, therefore, must next come under our observation, since this disease is often-times attended with no other marked symptoms, except fierce delirium; and this feature is sometimes so striking, or so prominent, that the physician may be incautiously led astray from the consideration of the real disease, to the organ which is sympathetically affected by the inflammation, rather than to the inflamed organ itself. The subjoined case may serve to illustrate my meaning, perhaps, in few words.

Elizabeth Plumbe, aged seventeen, admitted January 5th; maid of all work. Pains and swellings of all the larger joints; tongue furred; pulse full; catamenia due a fortnight ago. Just at this period she was seized with weakness and inability to work, and her pains and swellings gradually arose; there was no cardiac disturbance. She was going on favourably under the influence of colchicum until the evening of the 9th, when she was found propped up in bed. Countenance wan and very anxious, and, if asked a question, she looks at you with a vacant stare, smiles, and then turns her head away, and gives some evasive answer, and not in the sharp, ready manner which she did on her admission. There is (says the note) a very peculiar, and rather pleasing, idiotic cast of features (*risus sardonicus*); she is very low-spirited, often fixing her eyes on the ceiling, and lying for the most part on the right side. The

nurse states that she has got out of bed three or four times under pretence of wishing to pass her water, but that she has not done so when placed on the night-chair. A distinct attrition sound was heard over the base of the heart, and subsequently a bellows, mitral murmur over the left scapula. The case terminated fatally on the 31st of March, and there were found at the autopsy evident traces of recent acute pericarditis and endo-carditis.

In very many of such insidious attacks of rheumatic carditis, there is no complaint made of pain in the præcordial region, either by pressure in the epigastrium or on a deep inspiration; and this fact, without the aid of auscultation, necessarily renders the case more obscure and perplexing to one, who is not conversant with the morbid sounds elicited by the heart, under this acute inflammation.

In another instance of acute pericarditis which terminated fatally on the female side of the hospital, the patient, forty years of age, was admitted for mere disorder of the digestive organs, when I was hastily summoned to the ward, in consequence of the woman being in "a fit." When I arrived at the bedside I witnessed one of the most frightful series of contortions of countenance which the most horrifying form of epilepsy ever produced; and, as this train of symptoms was altogether new in the patient's history, I ordered the head to be shaved, leeches to the temples, and a smart dose of calomel, with colocynth, and an aperient draught. She rallied somewhat, but never became perfectly sensible; another fit succeeded the former, and a third, when she was carried off in the most frightful struggles of epileptic convulsions. At the *post-mortem* examination we could not trace the slightest morbid alteration in the brain or in its membranes, but the heart was covered with firm and recent coagulable lymph, and there was a large quantity of whey-like fluid in the pericardium.

In the early stages of endo-carditis I have repeatedly noticed that the first or systolic sound of the heart becomes sharp, prolonged, and loud, whilst the diastole is dull, muffled, and distant; this morbid change in the rhythm of the heart can only be attributable to a stiffened condition of the valves, which results from the early stages of inflammation, and which inflammatory action, if it continue unabated, will soon induce a puff, whiz, or murmur, and thus the unequivocal evidences of permanent valvular disease are plainly manifest. Such a damaged heart never regains its wonted elasticity and equal action; yet the patient may survive many years, especially the young, and never be sensible of dyspnœa, palpitation, or thoracic distress, until some exciting cause brings up fresh inflammatory action, and the organic changes of this once nicely-balanced engine are sensibly experienced in the sufferings of the patient.

It was observed in the course of the prefatory remarks, that the hospital practitioner is often placed under the most disadvantageous circumstances, to enable him to form a correct diagnosis of the severe cases which present themselves before him. Poor creatures, as it often happens, have been labouring under an acute attack of inflammation, which has run its course, even to ulceration on the one hand, or to serous effusion on the other, before they are removed from home to be brought here. The exertion, agitation, and worry of this journey oftentimes proves fatal to them, and the last shilling is spent to procure a conveyance to the hospital; so that when they appear before the physician of the week, there is no one to inform us of the rise and progress of the disease, and the patients are unable to do so from the exhausted state of their mental faculties, and thus are we left to conjecture upon many important points of the disease. This evil, in a great measure, springs from the difficulty these poor objects meet with in finding a friend who is willing to try and procure a letter of admission to the hospitals of the metropolis, so that delay is, in such cases, most dangerous and destructive to life. These things ought not to be allowed, as they tend to exclude the most deserving class of individuals from these charities, namely, those who are labouring under alarming and mortal diseases. But I would observe that the fatigue of bringing patients, labouring under some advanced form of acute disease, from a distance to the hospital, is usually the means of setting up another train of symptoms, which wholly mask the original attack; thus, in the instance about to be recorded, the onset of the disease was doubtless acute inflammation and ulceration of the bowels; but the exertion of the journey here induced perforation of the intestine, and then another series of symptoms sprang up which preponderated over the former ones, and gave rise to an incorrect diagnosis. It is on this account that I would rank DELIRIUM FROM ENTERITIS under this division of cerebral sympathies.

Elizabeth Cremen, aged twenty-eight, with an infant eleven weeks old at the breast, admitted May 15th. Countenance dusky, or of a pale, livid hue; features pointed, and expressive of acute suffering; eyes half closed; pupils contracted, and scarcely sensible to light; constant delirium, and unable to describe her sufferings; and there is no one who accompanied her to the hospital who can inform us of the rise and progress of her illness. Appears to refer her pain to the abdomen, which is not tense nor full, but resents pressure. Incessantly getting out of bed, so as to require restraint; extremities cold and mottled. Under the above circumstances it was looked upon as a case of fever, with severe cerebral disturbance, and she was treated according to this supposition; but she rapidly sank, and died in three days from her admission.

Post-mortem Examination Twenty Hours after Death.—Abdomen. The peritoneal cavity was filled with lymph and fecal matter. There was acute peritonitis and enteritis. Eight or ten ulcers, varying in size from a pea to a sixpence, were found along the transverse portion of the ilium; the upper ones were in an advanced stage of reparation; the lower ones were not so. One of the larger ones, a foot from the cæcum, had perforated the bowel, and allowed its contents to escape. There was no ulceration on the edge of the cæcal valve, as in ordinary fever; and the transverse form of the ulcers gave them the character of tubercular excavations, rather than of those ulcerations ordinarily observed in fatal cases of fever.

Just about the same period that the above case terminated, a man, aged forty-six, was operated upon by Mr. Arnott for inguinal hernia, May 13th. The case went on most favourably until the 25th, or twelve days after the operation, when I was requested by that gentleman to see the patient, in consequence of a sudden attack of delirium which had come on. He was found lying on his back, with his features pinched and sunken, his countenance dusky and livid, with a faint outline of the "facies Hippocratica;" eyes wandering about the bed wildly, but without animation or expression; incessant talking, swearing, and a determined obstinacy in refusing to answer any question, or to allow himself to be touched. The respirations were wholly thoracic. Notwithstanding repeated doses of calomel and opium, fomentations, &c. &c., he died in sixteen hours from the time of the accession of the delirium. We were fully convinced that the bowel must have given way, or else that there was acute enteritis; and so it proved to be, for at the *post-mortem* examination it was found that the stricture had gripped a portion of bowel *above* the strangulated knuckle of intestine, and this ulcer had not undergone any reparation, but it had given way; and the result was acute inflammation of the whole ilium and jejunum.

DELIRIUM IN HYSTERIA.

How shall I commence a description of this protean form of disease—Hysteria? I scarcely know in what manner to begin, or where to extend my observations, for truly this singular deviation from healthy nervous energy does so constantly tinge, or disguise, or mimic other diseases, that in the whole class of female disorders it is ever creeping in, more or less, to the annoyance of the patient, and to the still greater perplexity of the medical man.

But as I am to notice those cerebral disturbances, the symptoms of which assimilate themselves so much to those of real diseases of the brain, and lead us oftentimes to suspect cerebral lesion, or poison, or inebriety, when there is neither the one nor the other, I would at once describe a case, such as it is, our lot to meet with continually in this building.

It is usually about the dead of the night, at least most commonly in the evening, that a large body of police, with a fair attendance of women, carry into the out-patient's room a female, fastened down on a stretcher. It is stated that she has had a fit, and has screamed, and has become so violent that all efforts to control her were quite ineffectual. We are summoned to the case just as we have retired to bed, perhaps; we find a fat, healthy-looking young woman prostrate on this stretcher. Her eyes are fixed, pupils dilated, acting slightly under a strong lamp; she is pinched, slapped, her hair pulled, and every effort made to rouse her, but all is in vain. Perhaps we may see through the case at once; however, the moral force here is invariably more effectual than the physical. We notice a nictating eyelid, and a snort or groan is given, yet there she lies unconscious, apparently, to all that is going

on around her. We raise a commanding and authoritative order that all attendants shall be immediately excluded; thus, "Policemen, turn out the whole of these persons, both male and female." "Four policemen stop here to assist us"—pausing. "Now, policemen, bring her up to the light;"—again pausing. "Some severe measures must be taken in this case, Mr. House-surgeon." "Nurse, bring in two or three pailsfull of cold water." "You, night-nurse, go and procure two or three thick blankets." "Call up the surgery-man to shave the head." "Get the stomach-pump in order, if you please, Mr. House-surgeon." And thus one order follows another; the policemen stare, and are all attention and mute; there is a pause between each order so given; the medical officers whisper together as to the probable exposé that will soon take place, and whilst the cold water is running into the pails, and the blankets are being passed around her waist, and the clack of the large scissors is heard over her fine but dirty locks of hair, our patient opens her eyes, and with (apparent!) astonishment, cries out, "Where am I?" "What are you going to do with me?" "Let me go home!" "O mother! do take me away from these cruel brutes," &c.; and thus often and often does our patient get up from the stretcher, rub her eyes, walk about the room, and leave the building without a single attempt made on our part beyond this to rouse her. A young woman whom we admitted on one occasion lay two days and nights in this state, until we were worn out with the deception, though I did not at first suspect the case to be hysteria; and having bound her down in bed, I stood over her, together with the house-surgeon, and kept up a stream alternately of cold water upon her forehead for the space of a quarter of an hour, when she roused up, and cried, "O, Mr. Corfe, do have pity upon me, and don't drown me outright." This young woman had frequently been a patient in the medical wards before, with almost every form of hysteria; for instance, she walked on the tip of one toe, with the hip and heel elevated, for nine or ten months; this was ultimately conquered by the cold douche and moxas; but when this fit arrived, I was posed, and could scarcely believe it to be hysterical in its character, until I had narrowly watched her during the whole of the second day.

But it would lead me too far astray from the subject in hand if I was to relate a third part of the perplexing, obstinate, and deceitful cases that have presented themselves to our notice under this head; truly one might easily compose a large volume upon the subject, and, when completed, little information, and no great practical benefit, would be derived from its perusal; these cases must be seen repeatedly, their phases watched and compared, one with the other, before the student can be led to suspect hysteria where it really exists.

There are other cases, however, in which females become extraordinarily excited, and this usually occurs from a small quantity of liquor taken upon an empty stomach; their passions are excited, the mind roused up to the highest pitch, and they are dragged or carried into the hospital, screaming outrageously, tearing their hair, knocking the head on the floor, rolling about like maniacs; nay, I question if any scenes are witnessed in a lunatic asylum similar to these repeated exhibitions in our large hospitals. Now, all attempts to pacify such persons by ordinary means, as by argument, by medicine, or by reasoning, are fruitless; they are like eels for wriggling, and like bulls for fierceness and strength; our only alternative is to fix them on the stretcher, and strap them there; mount a chair placed on each side of the head, and keep up a constant small stream of cold water on the face; and the more they scream, the more cold water they are obliged to gulp down their throats, until the globus is conquered, the head cooled, the passions subdued, and, when they really find that we give the more in proportion to the screaming, they become calm, and sue for pity in some such language as, "O pray, Sir, let me up;" "Don't, pray, give me any more;" "I am very well now;" "I'll make no more noise," &c. &c.

It must be always borne in mind that the pitiable subjects of epilepsy present a different train of symptoms from those I have cursorily described, and yet there is such an apparent assimilation in the two paroxysms that even an experienced eye cannot, at all times, decide which disease the patient is labouring under. However, let me briefly relate the main features of the two diseases. The hysterical patient throws the trunk and limbs about with strong convulsive movements, wriggles from side to side; there is no distortion of the features, there is no foaming at the mouth, no fixedness of the eye, but it rolls about, and the lids nictate, sometimes in the most rapid manner; the pupils obey the stimulus of light, the skin is hot, the pulse is quick; there is no loss of consciousness, but there is grinding of the teeth occasionally, though the tongue is never bitten.

The epileptic patient lies more tranquilly, though there are convulsive throes, yet they are regular in their action, and confined chiefly to one side of the body; she is not unmanageable, a nurse can usually control her movements. The face is more or less distorted, livid, and foam issues from the mouth, with or without blood; the expression of the countenance is always altered in a paroxysm of epilepsy, but rarely so in hysteria; indeed, the distortions are as frightful in the one as the features are placid in the other; the cornea is bright and glistening in the former, whilst it is dull, or lifeless, or expressionless in the poor epileptic. I never was deceived yet by the state of the iris before a strong hand-lamp in these two diseases. In hysteria it will contract readily, again dilate, and again contract, so long as the light remains before the cornea; the eyeball likewise will roll and oscillate under this stimulus.

But the eye of the epileptic will evince none of these movements under a strong light. Often and often, have I suddenly darted the strong glare of a lamp at a "fit case," brought in by the police on a stretcher, and though there were no symptoms of consciousness before, she has heaved a deep sigh, opened her eyes, turned away her head, and evidently showed herself up to be in an hysterical paroxysm. A few smart showers of cold water, from a quart jug, have soon brought her to her senses. Senses! should I say? No; brought her to unmask and exhibit some of her real characters. I am willing to admit, with the most eminent authorities of the present day, that many of these hysterical paroxysms only occur in those females where the uterine functions are more or less disturbed, and the general health impaired; and that, to a certain extent, they have not a control over these fits, when they approach, so as to shake them off. But by far the largest number of females who are either brought here, or who are seized in the wards of the hospital, present no such history. Their passions of jealousy, envy, rage, malice, or disappointment have been roused, they have "worked themselves" up, and at length have gone off into "a fit." Now, the history of many such patients does not enable you to lay down the proximate cause of this attack to any functional disturbance. When calm, they will inform you that they were in excellent health; that they were annoyed, excited, or chagrined at some occurrence or other, perhaps a mere trifle, and that they have "boiled up" at it; and thus reason has lost her sway, the reins have been let loose upon the neck of the evil passions of the heart, and women have thus become ungovernable and no longer able to attend to parental advice or submit to any control.

There is also an epidemic character about hysteria: a whole ward has been infected by it upon the admission of one strongly-marked case: globus has arisen in this one; pleurodynia in another; syncope in a third; nervous crying, sobbing, barking, hiccoughing, and laughing in another; a fractious and determined opposition to all discipline in the ward, or an obstinate refusal to take medicine, or to be on amicable terms with the nurses and other patients, has sprung up in many more, so that there is a complete mutiny amongst the whole, some criminating others, and recrimination following in return. In the midst of this worry, vexation, and, to my mind, most annoying state of things, we are suddenly called to a case in the ward of "a girl in a fit." The paroxysm is well marked, and, without any ceremony, we commence a thorough sousing of cold water; the patient soon rallies out of it: the whole ward is in consternation at the boldness and "cruelty" of the treatment, but to a certainty, almost, we hear of no more hysteria, or hysterical symptoms, for months afterwards. Nay, I have transferred quarrelsome, irritable, and hysterical patients from a disturbed ward to one that was quite orderly and free from the malady, and the infection has run through the room, until some severe measures were adopted to "nip it in the bud." Can any evidence be stronger than this to prove, that, there is very much more under the control of the will, than some writers upon this subject are willing to admit?

A striking instance occurred some time ago in proof of this assertion. My valued friend, James Clayton, Esq., requested me to accompany him in one of his usual visits to a female charity-school, to which he is surgeon, in the suburbs of London, in order, as he observed, that I might witness a very curious pathological scene. I was not made acquainted fully with the singular phenomena that were to be presented to my notice; indeed, it would have baffled description; for we were shortly ushered into the sick dormitory, when no great stretch of the imagination would have led a person to suppose, who had been introduced into the room blindfolded, that he was in a mena-

gerie of gallinacea: there was, in short, the squall of the peacock, the quack of the duck, the crow of the cock, and the cackling of the turkey sent forth by a group of eighteen or twenty girls between the ages of twelve and sixteen. It was most ludicrous, and "the uproar in the building now became alarming to the neighbourhood, and from the loudness of the sounds it was difficult to separate the patients effectively;" and yet the above-named gentleman had attempted various means to eradicate this imitative epidemic from the school, but it had been hitherto ineffectual; and one of the main objects of my visit was to inform them all, before me, that I had made arrangements at the hospital to receive them there, where they would be roughly handled with shower-baths, &c. &c., unless the complaint left the house*. This information had its desired effect: the thoughts of going into a hospital, before they were really *ill*, drove away this mimicry and worrying noise, and I have heard that it has never returned.

Some pathologists would probably consider the above epidemic more entitled to the name of chorea than of hysteria, but we must place it, I apprehend, where the zoophytes are placed in natural history, that is, between the two kingdoms, as it partakes of the character of both of these diseases in some respects.

A plump and well-formed child, only ten years of age, is now in the hospital, who has been kept on her back upwards of four months, for reputed spinal disease; the countenance is placid, the voice unusually deep-toned, the legs drawn up to the abdomen, the bowels costive, and the tongue furred. Both the physician and surgeon, contrary to my suspicions, declared that it was purely nervous and totally unconnected with spinal disease. The former gentleman desired that the child should have cold affusion to her body by means of sponging daily, and that she should be made to walk a little, if possible. To my surprise, when she was, after much labour and perseverance, made to put her feet on the ground, it was apparent, that, if her mind was engaged by conversation and repeated questions, the legs were placed on the floor, and used as well as those of a healthy person, but that, if she was allowed to stand still and "look at her legs," the knees tottered, bent, and down she sank and squatted on the floor. Seeing through this nervous trick or fraud, I then used rather rough language, scolded her, and made her walk again and again down the ward, till at length, in a few days more, with patient labour, firmness, and yet some coaxing, she had made so much progress that I yoked her arm in arm with a bad case of chorea of the left side which came into the ward. But it was observed that the little urchin had depth of discrimination enough to walk on the side, and take the arm, of the calmer half of the chorea girl. In remonstrating with her for not taking the other arm on the wriggling side, she coolly looked up and said, "O, Sir, that's the dance arm, and I can't hold by that." However, she was ordered to make friends with the dance arm; and, as the girl was half a foot taller than this child, its wriggling motions, as they walked side by side, soon brought her to feel that walking *without* such a restless companion was by far the pleasantest mode of exercise and of progression. This is the only instance that I can remember of such a well-marked form of nervous depression, idleness, and indolence, occurring in a child who had not completed her tenth year, and yet it formed a most ludicrous though instructive lesson to the whole medical class.

But the cerebro-spinal system often participates in this sluggish, morbid action to such an extent, that the patients are convinced that they can neither walk nor sit†. One of the many instances of this description occurred here a few years since. A plump, healthy-looking woman was admitted into the physician's ward, whose mother stated that she had a disease of her spine, that she had never been able to walk for nine years, and had wholly kept her bed during that period. On examination of the spine, which was quite straight, though morbidly sensitive in every part, the surface bore evident marks of the treatment she had undergone from various medical practitioners who had seen her. Eschars from issues, setons, cupping, leeches, and tartar-emetic ointment were profusely scattered over the whole column. Her mother, it should be observed, was entirely supported by the kind contributions of several ladies and gentlemen in the neighbourhood, who subscribed small sums weekly for the

* These curious cases are drawn up in detail by Mr. Oscar Clayton, and will be found in the twenty-sixth volume of "The Medico-Chirurgical Transactions," 1843.

† "We have seen this symptom (spinal deformity in hysteria)," observes Andral, in his Lectures on General Pathology, "last as long as eight months; we have never noticed it in the male sex, nor in women over forty or under twelve years of age."

support of this widow and her only daughter. The first thing we did was to dress her and to place her on her legs, when by dint of bullying, drilling, swinging, and dragging one leg after another, we succeeded in ten days in making her walk up and down the ward leaning on the nurse's arm, and in three weeks from her admission she was walking with firmness and alone in the hospital garden. The mother came to visit her daughter, and, seeing her moving about the ward alone, commenced a most violent tirade of abuse against the daughter, nurse, and the medical gentlemen, for making the woman walk. Her language too plainly betrayed her real sentiments; for it was certainly not joy on beholding her daughter's perfect restoration to the use of her limbs in the short space of three weeks, but rage at the expected loss of her weekly allowance. Accordingly she went round to the families and set afloat the most vicious lies respecting our treatment of the woman, and, of course, no small share of scurrility was heaped upon my back; this brought many inquirers to the hospital, and when these kind friends heard the real state of the case, and saw the patient in rude health walking about the wards, they were so indignant that they very properly withdrew all support from the deceitful couple.

In another instance, a young, healthy-looking woman had been on crutches for nine months with diseased hip-joint, so called; her toe only touched the ground, and she declared she could not walk without these supporters. I immediately took away such unnecessary props, placed her upon a high table, and made her swing her legs for two or three hours in the course of each day. I then drilled her up and down the ward, and at length, by hard and laborious perseverance, she walked out of the hospital in a few weeks as firmly as the most robust person, and more grateful to us for our labours than the preceding individual.

When I was prosecuting my studies at the Salisbury Infirmary, there resided in the town a near relative of mine, who was a shrewd, clever person. In the circle of her acquaintance was a lady, a spinster, who had arrived at that equivocal age for marriage, forty-five, who was possessed of limited means, but who was, moreover, troubled with some kind of "*fits*" occasionally. My friend invited her to pass a few weeks in the town, at her house, which was accordingly accepted; but very shortly afterwards these "*fits*" appeared, to the great annoyance of her hostess. But as they recurred again and again, and did not seem to excite any distress on the part of the patient, so they likewise ceased to cause any alarm to the lady of the house. At length, on one occasion, when the visitor went to lie down in the forenoon, preparatory to a fit, my friend seized the opportunity by saying, "Well, my dear Miss —, if you are going to have a fit to-day, I'll lock you up in your bedroom, and go out and spend the day with Mr. and Mrs. Arthur —;" which she accordingly did, and returned to her patient in the evening, whom she found quite well, but highly chagrined at the treatment she had received. Nevertheless, she had so far conquered the "*fit mania*," that we never heard of any more of such attacks, during the remainder of her residence in the town. Now, had a medical man exercised this, apparently, cruel treatment, he would doubtless have received his congé, and would never have been allowed to set his foot on the threshold of the door again. That morbidly indolent state of mind, which induces and encourages these attacks, also gives rise to that slothfulness of body which is oftentimes so bewildering to the practitioner, that he scarcely suspects the disorder, but readily catches up the notion that there is spinal disease, and treats his patient accordingly. Whereas these females begin by *thinking* they cannot walk, because they *do not* walk, and then the mind is so obtuse that they *will not* walk, but lie in bed for days, weeks, nay, even for years together. I feel assured that the disorder is not bodily but mental; in proof of which they never exhibit so much annoyance when they are made to walk, as they do when you charge home to them such accusations as these, "You are ill-tempered, and won't try to exert yourself;" "This is laziness, obstinacy, and determination to resist all efforts to exercise your legs;" "I should think that you are of a sulky disposition," &c. They pout, swell, boil up, and oftentimes burst out into a violent fit of crying, which I always encourage, by telling them that it will do them good; and so it assuredly does, for, their passionate feelings having thus vented themselves, they become more tractable and more manageable, and at length they really strive to assist you in your endeavours to promote their convalescence, and sometimes finish by expressing much gratitude for your arduous and successful labours, and kind though rough treatment of their bodies. I am well aware that these remarks will not be very favourably received by some of my medical readers, but I can only add, that if I saw through such a case, and felt that the above line of practice was absolutely required, I would rather take my leave of the house and family

altogether than I would pander to the wretched state of mind and body of such patients, by dosing them with fetid gums, ether, camphor, ammonia, valerian, &c. &c., and thereby encourage, indirectly, the disorder; fill a long drug-bill; and lead the friends to suppose there was disease, when conscience plainly whispered in the heart of the prescriber that there was none. Such trimming policy is beneath an honourable mind, and finds no encouragement there, nor is it fostered but in the soil of a base and sordid disposition.

DELIRIUM IN CHOREA; MANIA.

Here we observe, not a positive aberration of intellect, but a slight fatuity of mind, which usually increases upon every successive attack of chorea. The cerebral disturbance, in ordinary cases, may be said to be the slightest in this class of diseases. The subjects of this attack are of an excitable, and of a nervous temperament; and it has been stated that they soon fall victims to acute rheumatism. I cannot say that my experience warrants this conclusion as a rule; but that chorea occurs with dark-eyed people, and with girls more than with boys, seems to be placed beyond all doubt.

It is useless to occupy the reader's attention with an account of this singular disorder of the nervous system, and especially as I have not much information to give upon the subject, beyond what is already known by the profession; nevertheless I may take the opportunity of remarking here, that the oldest person whom I ever saw with this disease was recently a patient in this hospital. She was a married woman, twenty-eight years of age, and had been frightened by a strange cat jumping on her back. The excitement of the nervous system was more alarming than I ever remember to have witnessed in aggravated cases of this nature. But the violence of the symptoms rapidly subsided under the steady and repeated exhibition of tartar emetic, in large doses. She commenced with half a grain every hour, for eight or ten successive doses, and then continued it, in the same quantity, every four, and subsequently, every six hours, when she obtained tranquil and refreshing sleep, and gradually improved under this treatment alone, and left the hospital perfectly well.

I may just observe that I have since had occasion to admire the same successful line of practice in other cases of cerebral disorder, amounting almost to mania. One case, especially, is before my mind's eye: it was that of a gentleman's servant, who was brought here in a state of the greatest excitement. There had been various moral causes to produce this disorder, but when he arrived here we found him most unmanageable, so that we were compelled to use severe but firm language, and he was thus persuaded to keep in bed without any restraint from straps, strait waistcoat, &c. &c. He now commenced the tartar emetic, in the same doses as the female patient, and at the same intervals, when the stomach became nauseated after five grains had been taken, and he obtained eight or nine hours of tranquil sleep, and awoke quite rational and calm, and his convalescence went on favourably from that time. He was ordered a purgative also of calomel and colocynth, which tended to relieve his head. He has since returned to his master's employment, and continues to be quite healthy, with the exception of occasional attacks of bilious headache.

PARALYSIS AGITANS; PARALYSIS E VENENO.

The former of these two diseases is only met with in advanced life, as its analogous affection, chorea, is only met with in youth. It is needless to occupy any space upon a subject which is so little understood, and the opportunities for studying which are so rarely met with in hospitals.

But under the head of the second title we might enumerate palsy from imbibition or from absorption of lead, mercury, arsenic, &c. &c. In the former of these metallic poisons the countenance assumes a dingy, fawn, or dirty fawn colour, the intellects become impaired, and the gait is awkward and unequal, and there may probably be found palsy of some of the extremities; the paralysis is usually most observable in the right hand (if he is a right-handed man, as a house-painter), and the wasting of the muscular substance is most apparent in the adductor pollicis and extensors of the hand and wrist. The gums, if there exist any tartar on the teeth, are always tinged with a pale blue line in such patients; but, if the tartar is absent, the coloured line is never present, at least, in any marked

degree. This appearance, and the arguments in favour of the presence of a blue gum, being a test of the existence of lead in the system, are severally entered into, and discussed, by Mr. Tomes, who has been at much pains to ascertain how far the blue gum may be relied upon as a morbid product. I must, therefore, refer my readers to the observations of this gentleman, which are given in a series of lectures, delivered at the medical school of this hospital, in 1846, and which are now published.

There is an excellent pamphlet by a non-professional gentleman on the subject of prevention of lead colic, by means of the sulpho-vinic acid, taken in the form of a drink, the mode of preparing which he there details. Some such formula is used by the men employed in a white-lead manufactory in Lambeth; but the masters find it necessary to lay down compulsory rules, in order to keep the men to its daily use, though the latter state, that as long as they adhere to this beverage, even in the hottest summers, a period of the year most favourable for the production of colic, a case scarcely ever occurs amongst one hundred men. The form here alluded to is used by the author of the above paper in a large white-lead manufactory at Manchester, and during the first year of its trial in 1840 there had not been a single instance of colic amongst two hundred men. It consists of bicarbonate of potash, treacle, water, and sulphuric acid. Fermentation by yeast is accomplished, and the liquor placed in barrels, and is fit for use in a week or more. The singular mode by which the ex-King of France and family were injured by lead is still fresh in the minds of the public. It appears, that although many members of our own royal family had resided there, and had not been affected with the water, yet that the Count de Neuilly and suite were seriously ill soon after they made it their residence. The cause of this sudden attack deserves to be noticed. The leaden cistern that supplied Claremont with water was always exposed to the atmosphere; but just before the arrival of the ex-king, this cistern was found to be so loaded with vegetable matter, such as leaves, &c. which had been blown into it, that, for the sake of cleanliness, the cistern was ordered to be covered up. The free carbonic acid was no longer wafted away by the surrounding currents of air, and it was therefore left to spend itself upon the cistern, which it did by forming, and then holding in suspension, portions of carbonate of lead, and of an oxide of that metal.

The disturbance of the mental faculties, in constitutions impaired by lead poison, is generally the result of gradual ramollissement of the brain and spinal cord; fatuity, loss of memory, epilepsy, and premature decrepitude are usually the sequelæ of this and other forms of slow metallic poisoning. We have had several instances of palsy from mercury in water-gilders, in whom iron, sarsaparilla, shower-baths, and slight shocks of electro-galvanism have produced striking benefits. In the last case that occurred the above treatment so far benefited him that he left the hospital with an intention of resuming his work, although he was strictly charged to leave the trade and obtain his livelihood by some other employment. The only case of paralysis from arsenic, taken as a poison for a suicidal purpose, which I have witnessed, occurred many years ago. Sarah Harris, aged twenty-two, took about a drachm of arsenious acid, in consequence of disappointment in courtship, and was brought here in a few hours afterwards, and admitted January 7th. The surface was cold; extremities livid; pulse scarcely perceptible; and, in fact, she appeared to be rapidly sinking. She had vomited some dark fluid before admission, it was stated. A warm bath, sinapisms to the epigastrium and feet, with some mild stimulants, were administered, when she gradually recovered from this state of collapse, and ultimately became convalescent from all the acute symptoms of gastritis which supervened, by the repeated application of leeches to the region of the stomach; but, when recovery was so far advanced as to permit her to dress herself, it was found that the lower extremities were so feeble that she was unable to stand. These paraplegic symptoms increased week after week, so that, although her general health had become tolerably good, yet, at the expiration of two months from the time that she committed the act, she had palsy and complete anæsthesia of both lower extremities. She was discharged, and subsequently underwent a regular course of electricity three times a week, when the power of the lower limbs gradually returned, and she walked to the hospital to offer us her thanks, having regained the perfect use of the legs.

As I may not have occasion to allude to the influence of mercury upon the system in any succeeding pages, I will take this opportunity of observing, that, for many years past, I have noticed a singular peculiarity in the gums of those patients who are taking mercury, *before* ptyalism presents itself. I requested my friend Mr. Tomes to investigate the subject amongst the dental patients under his care, and that gentleman has described the morbid

appearance in so concise a manner that I cannot do better than transcribe his observations, from his recently published lectures, on diseases of the gums :—

“In salivation produced by mercury the effect is first discernible upon the gums. Some hours previous to the coming of the metallic taste, and to the fetor of the breath, and also to the soreness and discomfort which mark the influence of mercury on the system, the gums show indications that these conditions are about to appear ; in fact, that the patient will in a few hours be salivated. The state of gum I am about to describe is, in fact, a premonitory sign of ptyalism ; for should it appear, and the mercury be immediately discontinued, yet salivation will come on. The sign is this : the adherent portion of the mucous membrane of the gums assumes an opaque white colour, contrasting strongly with the non-adherent portion, which preserves its natural hue or becomes red. The free edge of the gums is moveable, but that part which lies over the alveoli is firmly tied down to the periosteum ; and, as the edges of the alveoli present a festooned line, so the whitened mucous membrane presents a corresponding festooned line. Again, where the mucous membrane is loosely reflected from the gum to the cheek, the natural colour is preserved. The whiteness of gum is produced by an increased secretion of epithelium, which, from being thicker and more opaque, renders the colour given by the vessels to the adjacent tissues less apparent.

“The surface of the mucous membrane, when deprived of epithelium, is studded over with innumerable small conical elevations, or papillæ. The thickened epithelium is readily rubbed off the tops of the papillæ, while it retains its full thickness in the hollows between them ; thence, if closely inspected, the gums will not be seen to present a uniform white hue, but a mottled aspect, and this because the epithelium is thin over the papillæ and thick between them, and therefore more colour will show through at one part than at another. With the increased thickness there is a decrease of tenacity between the scales that form the epithelium, for the surface may be much more readily rubbed off than when in its natural state.

“This curious and useful premonitory sign of coming ptyalism was, I believe, first noticed, and its value pointed out, by Mr. Corfe ; at all events, he first drew my attention to the fact, and I am not aware that it has been described by any author. Since, however, Mr. Corfe mentioned the result of his observations as to the constancy of the sign, I have verified for myself its presence in all cases of salivation that have come under my notice, and from these I have written the foregoing account.

“If you would make use of this indication in your practice, it will be necessary that you should carefully note the state of the gums at the time the mercurial treatment is commenced ; for it is quite possible that other agents may produce a similar state of gum, and that such may exist previous to the exhibition of mercury*.”

The concluding remarks are important, inasmuch as I have frequently noticed that agents which stimulate the glandular system on the one hand, or the mucous surfaces on the other, have a tendency to produce the same appearance on the gums : thus I have noticed the change now described in patients under the influence of iodine, and in those who have taken repeated doses of croton oil, colchicum, &c. Nevertheless, one point is quite certain, that if the gums are observed before mercury is given, and no such white line is visible, its appearance is a sure forerunner of ptyalism, and presents itself twelve or fifteen hours before the individual is sensible of a “sore mouth.” An interesting and highly practical question then arises out of this fact : Is it necessary to continue the use of mercury to the same amount when this line shows itself, as before its appearance ; or, in other words, is actual ptyalism necessary to satisfy the practitioner that the system is under the influence of this therapeutical agent ? I believe that it is not necessary, and that, when the white line appears, the power of the remedy has already produced its influence over the inflammation, for the cure of which it was exhibited, so that the patient may be kept in a state of gentle mercurial crethism, without suffering from the, too often, frightful forms of ptyalism which the repeated doses of mercury produce. A case of acute endo- and exo-carditis lately occurred in which the constant use of calomel with blue pill during fifteen days failed to produce ptyalism, yet the white line above described was very marked after the first two days of the administration of the mercury : the lad gradually progressed towards a shattered convalescence.

* Lectures on Dental Physiology and Surgery, delivered at the Middlesex Hospital School. By John Tomes, Esq., Surgeon-Dentist to the Hospital. Page 371. Parker, 1848.

There was an attrition, or exo-cardiac sound, and a deep endo-cardiac murmur throughout the first fortnight of his illness; the former disappeared, but the latter never left the ventricular sound at the expiration of six weeks from his attack*.

CLASS II.

Division I. *Thoracic Derangement; Countenance dusky.*

From Pneumonia.	From Œdema Pleuræ (Hydrothorax).
Pleuro-Pneumonia.	Asthma.
Œdema pulmonum.	Bronchitis.
Emphysema pulmonum.	Endo- and Exo-Carditis.

When this department is viewed by the medical physiognomist, under disease, what an extraordinary area is disclosed to his view for observation, for diagnosis, for prognosis, and, above all, for treatment!

The first and the only attempt which has ever been made in this country to render physiognomy subservient to an accurate diagnosis of disease, was by Sir Alexander Morison, who published his work on "*The Physiology of Mental Diseases*," in 1840; but as these portraits are merely uncoloured sketches of the expression of passions, such as rage, joy, malice, envy, &c., of the maniac, and as they contain no shade or colour, they cannot depict the suffering which belongs to bodily disease, but merely that which belongs to the mind; and even that but imperfectly, since the important addition, shade and colour, are wanting.

In the preceding papers allusion has been made to the scientific writings of Sir Charles Bell, in that department of his profession which is still, and will long remain, the theme of admiration, both amongst physiologists and artists—I mean especially that extraordinary work on "*The Anatomy of Expression*," in which the author has thrown together various ideas in elucidation of his subject, and which I have had the gratification of hearing from his own lips in former days, whilst he held the office of senior-surgeon to this hospital.

If it is laid down as an axiom that "the study of physiognomy consists in the exercise of tact and judgment in searching for, in fixing, and in classing the external signs of the internal faculties, in discovering the causes of certain effects by the features and movements of the physiognomy †," then Sir Charles Bell has advanced some steps beyond this point, and has demonstrated, most clearly, that the muscles of expression peculiar to the human face are not only muscles of respiration, but are also peculiarly subservient, in this lord of the creation, to that instrument, the human voice; so that speech or language, a plaintive cry or an angry tone, weeping or laughing, hallooing or whispering, are, one and all, so intimately bound up in their several actions with the respiratory system, that it is utterly impossible to study the general physiology of respiration without at the same time entering fully into the collateral study of expression, of voice, and of language.

But I shall here quote the language of Sir Charles Bell's relative and successor in this hospital, from a little work recently published, and written with his usual clearness and talent, in the following words:—

* It has been stated upon very good chemical authority that when any form of iodine, as iodide of potassium, is given to a patient, that it can be detected in the urine shortly afterwards; but that if it produces the coryza, and general heat and weight over the temples, frontal and nasal sinuses, peculiar to its action, that then the urine no longer exhibits its presence. I am inclined to question the accuracy of this statement, because I have noticed that patients who have been taking the above salt for many days, and who are improving under its use, have nevertheless presented no coryza, but the saliva has readily iodinated a sixpence placed a few minutes under the tongue, and the violaceous tinge has not been more readily communicated to the coin by a person who was suffering from intense catarrhal symptoms, than by an individual who was free from these effects.

The continental physicians pursue another method for the detection of iodine in the system,—a piece of starched paper, dried, is placed on the tongue, and then the moisture is brushed over with weak nitric acid, when the iodine instantly appears on the surface.

† Lavater, *oper. cit.*

"In man the organ of breathing is constructed in such a manner that, besides ministering to the oxygenation of the blood, its primary office in the economy, it is the instrument of voice and of expression—two properties which bear relation to his intellectual nature. In order to adapt the organ to these endowments, it is necessary that the mechanism should have a form and arrangement distinct from that in the lower animals, where it serves for purifying the blood alone; and, as a correspondence always exists between the structure of the moving parts of the frame and the nervous system which regulates their actions, the change in the construction of the organ is accompanied with a change in the arrangement of the nerves. Accordingly, by comparing the nervous system in the inferior animals with its order and distribution in man, the author* found that a distinct class of nerves is appropriated in the human frame to the organ of respiration, and to that class he gave the name of 'respiratory system †.'"

"The tract or division of nervous substance from which these respiratory nerves originate, is distinct from those which give off the roots of the spinal nerves and fifth cerebral nerve," the latter being wholly a motor and sentient nerve, bound up together in the same manner that the ganglionic and non-ganglionic nerves pass off from the spinal cord to minister motion and sensation, respectively, in their varied distributions over the body. But these respiratory nerves, in passing out to the body, course, in a radiating manner, to parts of the head, neck, and chest, where nerves of the former class (motor and sentient) are already plentifully distributed. When we examine the structures thus supplied, we perceive that they enter into the formation of the organ of respiration. Mr. Shaw, therefore, states that Sir Charles Bell styled these nerves "superadded," or "respiratory ‡."

It cannot be too strongly insisted upon, that if the student in medical physiognomy is desirous of gaining accurate knowledge in the important branch of semeiology; and if he seeks to read disease, and the seat as well as the nature of that disease, in the varied and ever-varying shades of expression depicted in the invalid's countenance, he would do well to study Sir Charles Bell's admirable work, and then carry his mind, his thoughts, and his knowledge to the sick-beds of an hospital, where he will be astonished to see the power of the language of expression in disease, the truth of that language, and its steady character under all circumstances. When he has obtained a knowledge of the outlines of the anatomy of expression, he may realize them in the same way that an artist does who places himself before a mirror, and throws the passion of rage, grief, or jealousy into his countenance. He should study the physiognomy of a patient where anguish is strongly depicted, as in an individual labouring under some cardiac and pulmonary congestion or acute abdominal seizure; and from thence let him turn to another, in whom the character of the disease is equally marked, though it is thrown upon the face in a manner totally opposite to the first instance, as is the case with scrofulous disease of the brain, or tubercular softening in the lungs. But it is not expression only that the medical physiognomist has to observe: there is a department in this branch of clinical study which no physiologist can explain, and which no artist can depict; but which experience, and experience alone, at the bedside will enable the mind to seize, to store up, and to make use of in forming an accurate diagnosis of the disease which is the subject of study. This additional branch, then, is the shade, the colour, the tint, the hue, the cast, in short, the *tout ensemble* of the face, as it would be viewed by an eminent artist who was about to paint a likeness, wholly irrespective of its being the portrait of sickness or of health.

"But the chief use of the portio dura," observes Mr. Shaw, "is to associate the muscles of the lips and of the

* Sir Charles Bell.

† "On Sir C. Bell's Researches in the Nervous System." By Alex. Shaw. 1847.

‡ In order to impress the subject upon the reader's attention, I must be allowed to observe that the following nerves control the respiratory system:—

"A. The portio dura, or motor nerve of the face, arising from the medulla oblongata, close to the origins of the nervus vagus, the glosso-pharyngeal and spinal accessory nerves, included in the respiratory class, gives no branches to any of the muscles of the jaw, and is, therefore, *not* a nerve of mastication. Its branches pass off as follows:—

"1. Frontal branches to the muscles of the forehead and eyebrow.
 "2. Branches to the eyelids.
 "3. Branches to the muscles which move the nostrils and upper lip.
 "4. Branches to the lower lip.
 "5. Branches going down upon the side of the neck.
 "6. Connexions with the cervical spinal nerves.
 "7. A nerve to the occipital portion of the occipito-frontalis muscle, and to the muscles of the ear.

"B. The nervus vagus, or grand respiratory nerve.
 "C. The spinal accessory nerve.
 "D. The ninth nerve, motor nerve of the tongue.
 "E. Diaphragmatic nerve.
 "F. Branch of the sympathetic nerve.
 "G. Superior laryngeal nerve, a branch of the nervus vagus.
 "H. Inferior or recurrent laryngeal nerve, a branch of the nervus vagus.
 "I. Glosso-pharyngeal nerve."—(A. Shaw, *oper. cit.*)

nostrils, the two external orifices of the air-tube, with the rest of the organs of respiration ; but it fulfils other duties at the same time : its branches which descend upon the neck, and those which go to the orbicular muscles of the eyelids, control movements connected with disturbances in the venous circulation, produced in certain excited states of the respiration.* It is a difficult, but, at the same time, an interesting question to consider how far these various movements of expression in the face, under disease, influence the shades and tints of colour which are read in the countenance of a patient labouring under some painful disease of the respiratory system. There is certainly an *expression*, as well as a *colour*, peculiar to the physiognomy of a patient labouring under emphysema pulmonum, or under effusion of lymph into the pericardium. The colour and the expression, though closely allied in both diseases, are nevertheless distinguishable by a practised medical physiognomist. The same observation may be made respecting the *expression* of pneumonia, and the *tint* which that disease throws over the countenance.

Mr. Shaw most ingeniously explains the action of the respiratory muscles in modifying the flow of blood to and from the brain ; and observes that these muscles “compress the large veins when the chest is contracted, and when there is a tendency to regurgitation of the blood ; and that they take pressure off from them when the chest is expanded and the channel to the heart is free. The orbicularis muscle acts in compressing the eyeball whenever the chest is violently contracted, as in coughing, &c. ; by that means it closes the veins at the back of the orbit, and prevents engorgement of the fine branches which ramify on the delicate coats within the eyeball *.”

Now, whenever the flow of blood is tardy in its course through the venous trunks of the head, neck, and chest, as it occurs in emphysema and asthma ; and moreover, when, from this cause, there is a tendency to congestion in the circulation of the vessels of the eyeball, and consequent pressure upon the delicate coats of this organ, we always find that the globe is prominent, the eyelids wide open, and the brows raised, in order, as I imagine, to preserve the tissues of the eye from any undue pressure, and to enable the blood to pass out of the orbit with more freedom. You may read this venous congestion in the *expression* of the eye. I say expression, because in such a state of pulmonary derangement the eye is staring, and, whilst the individual converses, the neck is straight, the head is inclined backwards, the brows are raised, the nostrils dilated, their angles drawn upwards and outwards, whilst the voice is shrill and dissonant, so that a shrewd observer may readily conjecture that emphysema exists in one or in both sides of the chest.

Who does not notice these peculiarities of physiognomy in a person who hastens into your presence, breathless and eager to communicate some important information ? If a medical physiognomist was requested to draw the portrait of a patient labouring under bronchitis, or an attack of asthma, would he not throw the above peculiarities into his picture ? Whilst the opposite cast of expression, namely, the overhanging and knitted brows, the head bent forwards, the half-closed eyes, the retracted nostrils, and the mouth slightly open, with its angles drawn downwards, exhibit that languor of expression peculiar to cerebral distress or disease. In the first instance you meet with increased circulation in the face, hence there is a dusky blush, or a dull tint, thrown over the countenance ; whilst in the latter portrait you observe only a dingy, greasy hue, with little or no distinct *shade* of colour in it.

Some time ago I was spending the evening at a friend's house, when a new servant girl, who had arrived that day, entered the room with the tea service. She was a round, flabby-faced maid, with those peculiar fresh-coloured cheeks which border occasionally upon a purplish hue or brickdust red, and which are thrown into an intense blush by the least mental excitement. Her shoulders were slightly raised, and she had a large, bold, and staring eye ; the lips were thick, the nostrils dilated, and the whole thorax rounded.

The lady soon afterwards said, “What do you think of our new maid ?” I replied, “She looks weak in her chest ; and, if I were to pass a judgment upon her health, I should think that she was asthmatical.” In the course of another week I heard from her mistress that she had merited a scolding, and that her face assumed a deep purplish tint, and that her breathing was laboured, like the braying of an ass, as she was trying to cry. This induced me to watch her narrowly whilst she was bustling about her occupation, and I could plainly notice that the girl was asthmatical. On being interrogated, she acknowledged that she was habitually very short-breathed, and that her

* On the Nerves, by Alex. Shaw.

sister was occasionally almost "choked for want of breath," and was obliged to send for the doctor, and that neither of them, all their life, could run without difficulty of breathing.

Since the above period I have seen many well-marked instances of the same character of face: one in a young woman of eighteen, and another in a girl of fourteen; and in both of them there were unequivocal signs of congenital asthma. Other examples might be also adduced to show that the peculiar *colour* of the countenance and flabbiness of the cheeks are more or less connected with some impediment to the course of the venous circulation in the vessels of the neck and chest. This congenital dyspnoea, I apprehend, may be very frequently referred to the imperfect obliteration of the foramen ovale, constituting, in fact, a mild form of cyanosis; whilst the pulmonary disturbance is the effect of such cardiac malformation.

There was a night-nurse lately placed in one of our wards who attracted my attention, soon after her arrival, on account of the inharmonious and unequal tone of her voice. I was inquiring into the condition of a patient in the ward, when her answers were given with that peculiar absence of symphony which is observable in a lad whose voice is just breaking at the age of puberty. The feeble light of the room would not allow me to pursue the study of the physiognomy of her health until the morning, when I took an especial occasion to enter into conversation with her; and, as she spoke, the shrill voice again was heard, the eyes were widely expanded, the brows raised up, the mouth slightly opened in the acts of respiration, the nostrils distended, the shoulders shrugged, and the neck thrown backwards. My diagnosis was instantly formed, viz., that she was asthmatical, and that she would never be suited for the work of a night-nurse. I asked her no questions respecting her health, but merely inquired of her day-nurse soon afterwards, an experienced woman, how she did the duty; and her answer was brief but pointed:—"O Sir, she is a very willing woman, but she is so short in her breath that she cannot do any active work whatever, and is, therefore, of very little use in the ward." This convinced my mind that a thoracic disease may be recognised in the character of the voice, as well as in the expression of the face, and in the *expression* of respiration. The hollow, deep tones of voice of a patient with tubercular softening in the lungs must be familiar to many practitioners*.

Another practical illustration of the influence of disorder of the lungs over the tone of the voice recently occurred. A man applied here with a dusky face, staring eyes, elevated shoulders, and a barrelled thorax, so that emphysema was discernible in the first glance of his countenance, and after the second or third auscultation of his chest he inquiringly said, "Do you think, sir, that I am consumptive?" "No," was my reply. For, I should observe, that absence of respiration, clearness on percussion, throughout the chest, could leave no doubt that it was a simple form of ruptured air-cells. "Well, Sir," he added, "I have been told that I am not, by other medical gentlemen; but is it not very singular, then, that I can sing as well as I ever could in my life?" "Not at all," I replied, "as you have more wind in your chest than you want, or can get rid of, so that you can afford to spend a little of the surplus in singing," &c. I soon afterwards had an opportunity of hearing him sing, though he was not aware of it, when I noticed that the voice was sonorous and clear, but he could only move it upon one note, in semibreves or crotchets, as in singing "God save the Queen;" but if he came to semiquavers or apogituras, or tried to pass up or down the octave in thirds or in fifths, his voice faltered, and he could not accomplish it. In short, his larynx was acted upon in much the same manner that the bass note of a pibrooch is kept going by the accumulated bag of air pressed out from the bellows by the arm; but the voice of such a patient is no more capable of singing an air with fluency and modulation than is the pibrooch in giving the treble notes of a Scotch jig.

Patients afflicted with the above disease will often keep up a conversation in the most loquacious manner, expending three times the number of words in *one expiration* that a healthy person is able to do; so that one might paradoxically say that, although the man is "short of breath," yet he has "more than he wants."

There is another instructive point which the voice elucidates in the formation of a diagnosis of thoracic diseases; and it is the following:—that by your own voice, practised upon the chest of a patient with certain morbid changes

* In the Papal States, where every opportunity is taken, and every means are used, to detect and publish the description of persons who travel through the country, the voice is much attended to, and the character and tone of the voices specified in the passports; and by the description of this human sound, man is often enabled to recognise and detect his fellow-man.

in the lungs, you may glean some very valuable information respecting the condition of those organs. This diagnostic help may be styled Heautophonics, and an instrument which I have had made for the purpose, is termed an Heautophonon.

But, in order to simplify my meaning, the following illustration may be given:—Let an individual hold a hat in his hand, and putting his face close to the hollow, let him talk into it for three or four minutes; he should practise this adjoining to a corner of a room where an angle is formed by two solid pieces of wainscot; and, having thus talked, let him suddenly shift his head and talk into this angle of wood, and instantly his voice falls a semitone or more. Let him repeat the experiment both ways alternately, and he will soon satisfy his mind, especially if he has a moderately good ear for detecting variations of sound, that, as he talks into the hat, his voice is raised half a note, and *vice versâ* *.

This curious study should be pursued several days, and repeatedly gone over, before the voice can be made subservient to the detection of disease in a patient; but when the ear is pretty well tutored, and can distinctly catch the modification of sounds of one's own voice—whether the individual talks into the air, into a hat, into an angle of wood, or into one of stone—he must then place his ear over the base of the heart of a vigorous, healthy man, and recite some portion in an even and in an audible voice, or, what is preferable, he may count from fifty to one hundred, and then he should carry his ear to the subclavicular region of the right side, and again talk aloud, and he will find that his voice rises nearly half a tone. To pursue this study pathologically, he should now place his ear over the latter spot of a phthisical patient, who is labouring under complete solidification of one of the upper lobes, and once more count upwards, then shift his ear to the lower lobe of the opposite lung, which we will presume is healthy, and count again, and the voice which was bass, resonant, and vibrating to his own ear in the first spot, will now become raised or more tenor, less resonant, and less ringing.

The same observation applies also to the alteration of one's own voice when we talk over the solidified lung of a pneumonic patient, who is labouring under that stage of the disease known as red hepatization; whereas, on the other hand, if there is a cavity in the upper lobes, as in phthisis, or a permanently distended lung, as in emphysema, a well-tutored ear will notice that, as he talks over such spots, the voice is imperceptibly raised a barytone, and, *vice versâ*, a semitone. But, again, if the chest is full of fluid, as in dropsy of the pleura, or in empyema, the voice of the auscultator, like the percussion, emits only a “son mat,” a dead, non-vibrating, non-resonant sound. These, then, are the fundamental principles of the science of heautophonics, from *εαυτον* (self) and *φωνη* (voice).

During the whole of these studies the patient, of course, is a passive agent, and therefore is not required to take any part in the proceedings; indeed, if you begin by catechising him first, as in the usual mode of auscultation in order to hear his voice, or his respiration, &c., you will be sadly perplexed by his interruptions when you attempt to auscultate your own voice, through the medium of his chest, if I may be allowed such an expression, as he thinks probably that you are talking to him, and that, therefore, he must get some answers for you concerning his feelings, &c.

By these means the chest of the patient is used as a stethoscope, or is made a medium for auscultating the organs within, through the medium of the voice of the practitioner †. If any of my readers are credulous upon these points, let them amuse their ears and exercise their voices upon the chests of half a dozen healthy men, and, their scepticism will very soon vanish; for they have no power to control their own alterations of intonation, since they depend upon the greater or lesser conducting power of the surfaces over which the voice is thrown. Of course,

* It is singular that so many students, and even professional men, should be carried away with the false notion, that a musical ear is essentially requisite for the study of auscultation, whereas the very reverse is so oftentimes the fact, that it is doubtful whether it is of the slightest assistance. There is, at this present moment, one of the brightest ornaments in our profession, as a physician and as an auscultator, who cannot hum the simplest tune correctly, as I have often witnessed. Mr. Elwin, formerly house-surgeon in this hospital, was remarkably quick in detecting the various modifications of sounds in auscultation, and yet he would often acknowledge that he had not the slightest taste for, or knowledge of, music, not even of the most simple air, such as “Rule, Britannia,” &c. &c.

† This principle is fully understood and acted upon by singers, performers on wind instruments, &c. The presence of curtains, drapery, and much glass in a room, tends to oppress the chest of the performer or singer to a painful degree; and this effect is fully obviated in the construction of those public edifices which are designed for oratory, or for preaching, singing, &c.

if the surface is spongy and loose, like a feather pillow, the conducting power is very small; but if the ear is laid upon a solid oak chest, the reverberation of the voice through the conducting power of the wood lowers the tone half a note.

In further proof of the utility, as well as of the certainty, of this new method of auscultating one's own voice over a diseased chest, I have frequently requested one of our shrewd pupils to listen to the chest of a patient who had unequivocal signs of phthisis. He has satisfied his own mind on which side the tubercular solidification existed: I have then requested him to withhold his opinion from me until I had auscultated my own voice over the two subclavicular regions; and the information which I derived from this source exactly corresponded with the information which he obtained from the voice and respiration of the patient, and we found ourselves simultaneously agree as to the spot where solidification existed*.

The foregoing remarks will show that the study of the physiognomy of thoracic diseases has been commenced with what we can hear rather than with what we can see, as the term implies; but after touching upon it, it is time to pass on to the consideration of the various morbid sounds which are gathered from the chest of a patient who respires and talks under your ear whilst in the recumbent posture. I shall, therefore, proceed to the several helps which the sense of hearing farther affords in the detection and elucidation of thoracic diseases; and as it is not my intention or wish to discuss subjects which have already been disposed of in elementary works on auscultation, I need not enlarge on a description of the varied sounds given out by the alteration of structure in diseases of the lungs, &c., and the influence, the respired air, the voice, and the cough of the patient exert in producing these sounds. I would, therefore, sum up the whole in a short table, known amongst the pupils who frequent the medical wards of this hospital as "The Alphabet of Auscultation."

ALPHABET OF AUSCULTATION.

Two Dry Sounds.—Rhonchus; Sibilus.

Two Moist Sounds.—Small Crepitation; Large Crepitation.

Three Vocal Sounds.—Bronchophony; Egophony; Pectoriloquy.

Thus:—

Two Dry Sounds.

Rhonchus.—Rhonchus, or snoring, heard in the larger bronchi, is produced by an intumescence or œdema of the mucous membrane of the bronchi, on which phlegm impinges. This sound occurs especially at the bifurcation of the bronchi, where the membrane is bevelled off, and is called by the French physiologists the "eperons," or spurs of the bronchi. When the fingers are spread out, the reflected skin from the base of one finger to that of the other, represents a magnified form of this reflection of the bronchial mucous membrane. The sound denotes the existence of bronchitis. The pathological change above described is well exhibited, in other respects, in conjunctivitis, when effusion exists beneath this membrane.

Sibilus.—Sibilus; wheezing, whistling, or cooing. Produced by the same cause as above described, with the exception that it originates in the smaller bronchi, so that the grave sounds of a bassoon, and the shrill sounds of a piccolo, or the air drawn through the larynx as in snoring, or through the semi-closed lips well moistened with saliva, afford a tolerably accurate representation of these two bronchial sounds.

Two Moist Sounds.

Small Crepitation.—Small crepitation is the invariable symptom of the first stage of pneumonia, and is produced by the inspired columns of air passing through a series of inflamed pulmonary cells, which are partially clogged

* Since these observations were made, I find that several continental writers have been engaged in the same pursuit, and those physicians who have carefully laboured in this field have satisfied themselves that hepatophones are oftentimes most valuable diagnostic helps. In the *Revue Med. Chir.*, t. iv. 1849, is a paper on "Pectoral Undulation, or Thoracic Vibration in Health and Disease," by M. Monneret, in which the author, it may be seen, has taken the ground that I occupied in 1847.—Vide *Medical Times*, 847.

with sero-sanguinolent secretion. The act of rubbing the hair between the fingers gives some notion of this important diagnostic symptom. I need scarcely say that emphysema from fractured ribs and wounded lung will cause this sound also; but, as I do not wish to confuse the student by describing those morbid changes which are produced by injuries, I shall omit any further notice of them now.

Large Crepitation is similar to the breaking of large soap bubbles, and is heard over the lower lobes behind, in cases of advanced or chronic bronchitis, the third stage of pneumonia, and in emphysema with œdema pulmonum.

Three Vocal Sounds.

Bronchophony, or increased resonance of the voice, is produced by a solid portion of lung acting as a better conductor of sound than a vesicular or healthy portion; so that the voice of the patient rings under the ear of the auscultator. This solidification is either the result of pneumonia, or of a mass of aggregated tubercles in the upper lobes. In the latter case it is heard under the clavicles; in the former it is usually detected over the lower lobes behind.

Egophony, or bleating of the goat. A sound peculiar only to the presence of a small portion of effused lymph between the surfaces of the costal and pulmonary pleura, the result of pleuritis. It is not heard when the effusion is copious, but it is again heard when the effusion is in the course of absorption. Hence it is an unfavourable auscultatory sign in the early, and a good one in the latter, stages of pleuritis. This sound should be listened for over the lower lobes behind; the ordinary seat of the early occurrence of pleuritis*.

Pectoriloquy is the effect of the intonation of the voice passing up the stethoscope as though it came from within the chest rather than from the mouth of the patient. Its production is the unequivocal evidence of a cavity in the substance of the lung, which cavity is usually in the upper lobes, and therefore this vocal sound is to be sought for under the clavicles. If you place the stethoscope over the wings of the thyroid cartilage, and make the person talk, you have a fair specimen of this vocal sound in the above diseased change.

Having said thus much upon the subject of using one of the special senses for the detection of diseases of the chest, and which more properly claims the title of auscultation, I now proceed to consider that information which the eye derives from beholding a series of changes which are no less useful than are those which we obtain from the sense of hearing; and they are equally as symptomatic of thoracic disease, and should be ranked amongst the semeiotics of this department of medical study, in the same way as the auscultation of the air, voice, sounds of the heart, &c. &c.

In the first place, then, we have to notice the varied forms of disease in these viscera, ordinarily met with in the medical wards of an hospital. Thus, pneumonia, pleuro-pneumonia, tubercular deposition or phthisis, emphysema pulmonum and asthma, bronchitis, œdema pulmonum or dropsy of the lung, pleuritis and empyema; hydrothorax, or dropsy of the pleura, in one or in both sides; endo-carditis and valvular diseases, in their more advanced condition; dilatation of the cavities of the heart, with thinning of its walls; the same change with hypertrophy of its walls; contraction of the cavities without hypertrophy, and the same contraction with thickening of the walls.

In proceeding to make a hasty sketch of these diseases, it is not my intention to confine my remarks to the various complaints as they stand formally in the several divisions of this classification, but to pass from one to the other in the course of my observations, in order to compare the various shades of peculiarity which the symptoms appropriate to each one of them exhibit: so that, in the glance I am now about to take, some diseases, such as emphysema, which stands in the third division, will be touched upon in treating of those diseases which are grouped in the first division of this class; nevertheless, a more explicit description of each one of these thoracic changes will be made when the diseases in each division are treated of. This mode of proceeding is the more practical and useful one, inasmuch as the main point to which I am anxious to draw attention to in this, as in all the other classifications

* If a bladder, half full of thin gruel, is placed over the naked chest of a healthy man, and the ear is laid on the bladder whilst the person is made to talk, the ægophonic voice may be heard.

of diseases according to their physiognomy, is the importance of exercising and tutoring the eye, the ear, and the hand, in various manipulations for the determination of diseases, whether they exist in the cranium, in the thorax, or in the abdomen.

In the first place, then, let us suppose that a patient presents himself with a heavy eye, knitted brows, a dusky, dirty-looking, inexpressive countenance, not livid, but similar to a man who is fagged out with a night's debauch of drinking and loss of sleep, and who has a greasy face, that looks as if it had not been washed for forty-eight hours. Perhaps the lips are covered with "herpes labialis" (a frequent occurrence in the early stages of the disease I am endeavouring to paint—at least so it is in London). His breathing is wholly abdominal; you hear him give a short, dry, sharp, and bounding cough. The pulse is hard and full, the skin is hot, and the man's looks are confused. Before you put the ear to the chest, you might venture to say, "This is pneumonia." But, as has been just remarked, we first glance at the countenance, and especially at that wonderful organ, the index of the mind—the eye. It is dull and heavy, the overhanging brows are knitted, the face reveals to the mind of the physician that the man is muddled. He looks stupid; there is a dusky flush over his cheeks, and the lips, especially in children, are of a dead rosy tint. The whole countenance is inanimate and expressionless, and you may read in it, oftentimes, "Imperfect oxygenization of blood."

Another patient drags forward for admission, presenting a thin face, high cheekbones, a glassy eye, dilated pupils, curved and convex nails (ungues adunci); a hacking, irritable, short cough; a raucous voice, a prominent pomum Adami, and you read "phthisis" in his physiognomy.

While a third, in the person of a tall, athletic Irish labourer, walks up, with a heaving chest, livid lips, a purplish, dusky countenance, raised brows, open eyes, *alæ nasi* acting, shoulders elevated and thrown forward, a barrelled chest, and a short, loud, deep, sonorous, and straining cough; add to these physical appearances the hints to be thrown out under the head of "Emphysema" and "Bronchitis," and you, as it were, read this disease in the man's face and in his deportment.

In pleuritis, on the other hand, there is a countenance lighted up with marked expressions of acute suffering; the eye is rather wild, and is carried hither and thither with anxiety and distress in its every motion; when, in an instant, perhaps, whilst the patient is giving a vivid description of his ailment, he is suddenly thrown forward or sideways by an involuntary jerk or catch in his breathing, and his respiration for a moment is suspended. You see how acute his sufferings are by the shock such a suspension of his breath produces. Unlike a pneumonic patient, he is very ready to talk and give you a graphic description of his illness and pains; the efforts of expiration in talking do not disturb him, as the lungs are now receding from the inflamed surface; but when he has exhausted all the air he inspired, and the lungs are collapsed, he involuntarily takes a deeper inspiration than he was wont to do, and the inflamed pleura is stretched; sharp pain is experienced, and he is ready to drop with its severity, and with the momentary sense of suffocation.

The action of respiration will be so far modified or altered in each of the foregoing diseases of the thoracic viscera that a well-practised eye can oftentimes, with one glance, conjecture which organ is the seat of special disease.

In pneumonia and pleuro-pneumonia (the chest and abdomen being laid bare in the male subject) the front of the thorax, from the clavicles to the eighth or ninth rib, is quite passive in the act of respiration; the small or floating ribs, with the diaphragm, act to a certain extent only; whilst the abdominal muscles take the most active part in the office of respiration. This is called, and rightly so, "abdominal respiration," and invariably denotes acute thoracic disease, and nearly always points to the pleura, or pleura and lung, as the immediate seat of inflammation.

In pleuritis this state of abdominal respiration is more especially marked, and is recognized immediately by a mere novice, when not pointed out to him. The intercostal muscles are immovably fixed in the acts of respiration; and, if there is any amount of effusion into the pleura on one side, some dilatation of that half may be noticed, as we pass our eye down the chest, outside the mamma, and compare it with its corresponding surface on the opposite: nay, more than this may be observed on viewing the two sides of the thorax. On the side in which

inflammatory action is going on, you may notice the passive state of the lower ribs, whilst the upper four or six act to a moderate amount. The intercostal muscles have the power, most undoubtedly, of acting in certain parts of the thorax, whilst they are quite passive in other portions: so that the whole of one side will act freely and perfectly, a greater portion of the other side will moderately rise, whilst the lower half, where pleuritis exists, will be as fixed and immovable in the acts of respiration as the spine itself. I have seen this repeatedly, in the medical and surgical wards of the hospital, in fractured ribs with pleuritis, as also in the acute stage of this disease when idiopathic in its origin.

The eye may readily discern the presence of empyema, when this organ has been somewhat experienced in its search after thoracic diseases, especially when the effused fluid in this cavity amounts to any considerable quantity: for in addition to the marked "abdominal respiration," already noticed under the head of "Pneumonia," and the passive state of the respiratory muscles of the lower half of the chest, you will find the non-inflamed side of the chest acting much more freely than the inflamed side, and there will be, perhaps, ever and anon "a jerk" or sudden "halt" of the intercostal muscles over the inflamed pleura, whilst you survey the chest of the patient as he lies in bed.

Again, if, as I have already said, there is much fluid effused in the inflamed pleura, there will be a manifest bulging of the affected side: so that, before the auscultatory talents of the pupil are called into action, the eye has pretty well satisfied the mind of the main features of the patient's disease.

In tubercular deposition (which is invariably met with in the upper lobes, and especially when that deposition has gone to such an extent as to cause inflammation of the pulmonary pleura) there is more or less adhesion of this latter membrane to the costal pleura; therefore, when these changes have taken place (and we rarely get the disease in an earlier form, except it be from a sudden outbreak of softened tubercles, producing hæmoptysis), the condition of the respiratory action is most marked, and is quite opposed to the former one, just alluded to. In solidification of the lung from tubercles, the following points are readily noticed by one who is accustomed to examine carefully the bare chest and abdomen of such patients in bed; nay, even in the erect posture, with only the chest exposed, as in our out-patient department. This state of respiration is so manifest and so decided to the eye, that an experienced man could decide upon the character of sounds which he would hear before he submitted his patient to auscultation. We may notice then, first, the freedom of action in the lower half of the thorax—all parts, in fact, below each mamma; the free expansion of the diaphragm and of the abdominal muscles; but, as the eye travels up to the clavicles, we invariably find them passive, or so imperfectly acting, or raised to so trifling a height, that I have often taken a pupil, and have asked him to inform me which part of the chest exhibited the most freedom in the respiratory action, and the answer has been as ready as it was accurate. The upper part of one side of the thorax in phthisis, generally speaking, acts to a less extent than the corresponding half, as the disease never progresses in an equal manner through the upper lobes of both lungs. There is a flaccidity as well as a flatness of the muscular front of this part, and, if a tubercular excavation has formed, the pleura (costal and pulmonary) will be adherent, and a depression over the second or third rib may be noticed corresponding to that portion of adherent lung which contains the cavity. This condition of respiration one may term "respiration by the lower ribs." If the patient is erect, and is desired to take a few deep inspirations, the passive state of the shoulders, clavicles, and upper ribs is more manifest than when he is in the recumbent posture.

I do not know whether the following curious fact has ever been published, though it may have been noticed by others besides myself. It is this: In tapping the intercostal spaces of these passive upper ribs of a phthisical patient with a sharp finger nail, there follows a curious vermicular motion of the fibres of these muscles, and the same effect is not produced in the same spaces between the lower ribs. I am not sure that the exact truth is embraced when I say that this curious wriggle of the muscle, on being so tapped, is not met with in any other disease but in that of phthisis; but whether such is the fact or not, I believe I can assert that it is rarely, if ever, present in any other form of thoracic disease, and that it is seldom absent in this. The explanation seems simple enough: the subcutaneous adipose cushion is nearly absorbed, the intercostal muscles are much exposed, and,

feeling the shock, they recoil under it. I am not, however, prepared to assert that it will not be found in emaciated persons who labour under any other attenuating disease than that of phthisis.

Many of the diseases of the chest are so painless in their nature, so rapid in their course, and so destructive in their issue, that the mere exercise of the senses of sight and of feeling is highly useful in the detection of these formidable morbid changes. The employment of auscultation and of heautophonics especially informs of the seat and of the nature of these fatal diseases.

It has often suggested itself to my mind that a useful and concise description might be given of the various kinds of cough which thoracic diseases furnish us with, for the latter do not more differ from each other, than do the several characters of cough which attend them. For instance, we might describe the heavy, coarse, stomach cough; the short, irritable, laryngeal cough; the ringing hysterical cough; the harsh and straining bronchitic cough; the suppressed and hard pneumonic cough; the abrupt, or jerking pleuritic cough; the barking cough of emphysema; and lastly the fretting, or hacking cough of tubercular softening. The whine, the growl, the bark, the snarl, and the snappish catch of the dog are not more significant of the animal's disposition and feelings than are these several coughs which respectively attend their peculiar causes.

AS PNEUMONIA OR PLEURO-PNEUMONIA is the most important, the most common, and the most fatal form of thoracic inflammation in this country, so I would place it in the fore front, and attempt to show by one or two instances, as I have already hinted at, when noticing the physiognomy of delirium masking pneumonia, that this disease often, nay, very often, exists when the practitioner, especially one who is inattentive to the science of auscultation, does not in the least suspect it. Let the following case serve to illustrate this assertion.

John Frampton, aged forty-nine, a bulky athletic man, a butcher, and an habitual spirit-drinker, admitted June 21st. Countenance heavy, and with a dusky flush; eyes glistening; conjunctivæ rather yellow; lips and extremities livid; respirations 36, and wholly abdominal; pulse 100, hard and full; bowels open; no cough! no expectoration! tongue dry and furred. Owns only to pain at the epigastrium, increased on pressure. N.B. This man, adds the note in my case-book, walked to the hospital merely to seek some advice and medicine, and was desirous of returning home to work, having only left off the preceding day; but he was detained as an in-patient, and sent to bed.

Auscultation.—Free respiration in every part of the right lung. Over the lower lobe of the left lung, behind, there was extensive small crepitation, gradually becoming less towards the axilla; there was also loud bronchophony; some small crepitation existed over the upper lobe.

The account of his illness was the following:—Six days ago he complained of general weakness, pain came on in the epigastrium, but he has never had pain or distress in his chest or breathing.

V. s. ad 3xiv. (syncope); hirud. xxx. mammae sin.; ant. pot. tart., gr. ss. 2dis horis donec nausea exciatur.

The following day the countenance was much improved, and less anxious; the respirations were more thoracic; nauseated and purged by the ant. pot. tart.; pulse 100, and hard; less crepitation over the lower left lobe.

C. c. ad 3xvj. lateri sinistro; hst. salin. c. vin. ant. p. t., m. xx.; vin. ipec., m. x. 6tis; hydr. chlor., gr. iij. 6tis horis intermediis; ung. hydr. fort. cruribus infricandum.

The following diagnosis was now made:—Red hepatization, or the second stage of pneumonia, exists in the left lower lobe, and the first stage, or “engorgement,” is going on in the upper lobe.

He continued to go on favourably until the evening of the 27th; but, although he had taken the mercury since the 22nd, yet his gums were not in the slightest degree affected, but his pulse came down to 86. Prior to this relapse we had been informed that he was an habitual spirit-drinker. He now became suddenly delirious, noisy, and sleepless; the pulse rose to 120; the surface became moist and clammy; great agitation of the whole body when he attempted to move; tremors of the limbs and tongue, which was dry and red; but hitherto he had had no cough, and therefore no expectoration! In this condition he lingered on, getting worse and worse, until the morning of the 29th, when, at eight A.M., he expired.

Post-mortem Examination Seven Hours after Death.—*Thorax.* Left pleura filled with turbid, wheylike serum without flakes, but some thin ones adhered to the costal pleura. Lung slightly compressed. One-third of the

lower lobe was in a state of grey hepatization, external to which, and around this portion, the lung presented the appearance of being mottled, from a melange of red points and grey substance, the former, it would seem, arising from the portions of unabsorbed red particles which still remained about it, for, above this spot, and in a distinct line along the edge of the lung, ran a piece of vividly red lung, sinking in water, and feeling firm;—*Red Hepatization*. Many portions, perhaps all, of the grey lung sank in water, and when it was squeezed, a dirty, grey, purulent fluid oozed out. The upper lobe was vascular, and some points of red hepatization were observed in it also. The lower lobe of the *right* lung, when cut into, was extremely red, and much frothy blood escaped on cutting it; this would seem to have been the stages of “engorgement” and red hepatization combined; but the latter was not so advanced as to influence the permeability of the organ. The heart was large, from hypertrophy of the left ventricle. The liver was large also, and gorged with blood. An unnatural amount of fluid was in the cavities of the brain.

I could adduce very many more instances of patients who have laboured under the severest form of pneumonia, but the symptoms of whose disease were so insidious, and so contradictory, that, but for auscultation and heauto-phonics, I am convinced the pneumonia would have been wholly overlooked, and the *post-mortem* examination only would have exhibited its fatal ravages. It has, therefore, become a practice in this hospital to submit almost every patient labouring under ordinary febrile symptoms to a careful auscultation, &c.; and it would be a great and a valuable desideratum in medicine if every man would follow this judicious practice: for if, as Dr. Christison justly and sensibly remarks in his work on “Granular Degeneration of the Kidneys,” “the most advanced disease of the renal organs may exist, urea may be circulating in the blood, and yet it is by no means an essential feature in this disease that dropsy, either general or partial, should exist;” even so, likewise, I may observe that the most alarming inflammation may be going on in one or in both lungs, carrying on mortal destruction throughout its whole texture; yet the medical man shall not be able to find cough, expectoration, or pain amongst the varying symptoms of this disease; and if he falsely hopes that the malady does not exist, because these physical signs are absent, and if, moreover, he obstinately rejects the invaluable aid derived from the sense of hearing, and of seeing, &c., his conduct is as unprofessional as it is criminal and indefensible.

The next disease which we may now advert to is BRONCHITIS, because it often happens that it is mistaken for pneumonia in its acute, and for phthisis in its chronic stages; but the physiognomy and the study of the assimilation of symptoms in these respective diseases will often solve this difficulty before the patient is submitted to auscultation.

In acute bronchitis, without emphysema, the countenance is lighted up with some anxiety, the chest heaves, the *alæ nasi* work, the angles of the mouth are drawn up in the respiratory acts, the eye is open and bright; but it is not so in pneumonia: the reverse of these physical signs present themselves there. Whilst in the chronic form of bronchitis, so often mistaken for phthisis, and *vice versâ*, the countenance is not wan, pallid, thin, distressed, pinched, and careworn, as in tubercular softening, there is no raucous voice or faint whisper in talking; no dyspnœa, compared to that which attends a protracted conversation with a phthisical patient. In the former the chest heaves, in the latter it is passive; the lower ribs only act; the clavicles are motionless; or, if the tubercular deposition exists chiefly in one lung, as already remarked, the subclavicular region is flattened, attenuated, and even hollowed out. But, above all, the respiratory murmur improves from *above* downwards in phthisis, whilst the bronchitic sounds are, for the most part, in the lower lobes, and the respiration improves from *below* upwards. This valuable diagnostic sign has been of the utmost importance in the decision of cases in our wards. On one occasion a gentleman’s coachman was brought here, labouring under hectic symptoms, blue countenance, and other evidences of rapid exhaustion; he had a severe cough, and the expectoration was moulded, globular, puriform, and sweetish to his taste*. We all pronounced the case to be one of tubercular softening, until the chest had been examined, when it was found that the upper lobes were tolerably free, but large, and general crepitation existed over the lower lobes. This convinced me that the disease was one of universal chronic bronchitis, and so it proved to be, for at the *post-*

* I have often had occasion to notice that, when flies assail such expectoration and such patient’s bodies, the case is progressing towards a fatal termination; whether it is the saccharine odour of the phlegm, or the effluvia of the body, or both, which attracts them, I cannot pretend to decide.

mortem examination there was not a vestige of pulmonary disease, but general engorgement of the bronchi, with heavy, globular masses of puriform matter which had impeded the admission of air and prevented the oxygenation of the blood.

My kind friend, Mr. Vickers, some time ago asked me to auscult the chest of a delicate female servant, under somewhat similar circumstances. She was supposed to be labouring under tubercular softening, from the emaciation, cough, and purulent character of the expectoration; but the reverse proved to be the case on examining the upper lobes, and on comparing the sounds they elicited with the bronchitic disease manifested in the lower lobes.

A relative of mine was under the care of a late physician of eminence, for unequivocal symptoms of phthisis, as he believed. There was upwards of a pint of heavy, greenish, rounded masses of expectoration brought up daily; rapid emaciation, slight colliquative perspirations, hectic, &c. &c. He was ordered to leave town for his health, and I went to see him at his residence in a village in Surrey. The same train of symptoms still continued, and I then ausculted his chest for the first time, fully anticipating to meet with cavernous respiration, pectoriloquy, &c., under one or both clavicles. My surprise was not little when I found neither, but healthy vesicular breathing under both. I watched the case narrowly, but he was suddenly ordered to leave this spot for Brighton, where he had not been for more than twenty-four hours, when his wife placed him in a Bath chair, and he was wheeled on the Marine Parade for the air; but he soon experienced a feeling of suffocation and distress that was indescribable, and shortly afterwards he fainted away. His wife became so alarmed that she instantly ordered a postchaise and removed him back to the village, from which time he rapidly improved, and has been ever since a strong, robust, and active man. I have since examined his upper lobes, and find them permeable in every part, without the least traces of solidification.

Bronchitis presents but little to the eye of the practitioner, apart from auscultation, that needs farther notice. I would only remark that during the winter months, among the large number of applicants at this hospital with chest diseases, two-fifths of them are bronchitic connected with simple emphysema, or emphysema with œdema pulmonum; so that the first-mentioned disease is only superadded to that of an old standing, but recently revived, emphysema. But I will suppose the patient presents the following appearances:—His respiration is deep and thoracic; the chest freely moves in every part; his countenance has a dusky, livid blush upon it; his eyes are clear and bright; his brows are raised; his eyelids open; his lips of a Modena red; the *alæ nasi* dilate during the efforts of breathing; his thorax is sonorous all over; he has rhonchus, sibilus, and some large crepitation over various parts of his lungs behind, especially increasing towards the lower lobes; he has a constant worrying cough, with repeated straining efforts to bring up phlegm, and after some trials (perhaps twenty or thirty) he expectorates a tough, frothy mucus, with a muco-purulent sediment: such a patient undoubtedly labours under bronchitis, superadded to emphysema, with antecedent cardiac disease; and this latter change probably consists in a dilatation of its cavities and a thinning of its walls.

Amongst the general remarks which were made upon the physiognomy of the diseases of the thorax, it was mentioned, that a dusky and anxious countenance, a greasy face, nostrils dilated, their *alæ* waving to and fro, together with more or less swelling of the joints, invariably denoted either endo-carditis or exo-carditis, or both. I say more or less swelling, for at this moment there is a most acute form of this disease supervening upon the slightest possible rheumatism of one wrist only, in a delicate lad of nineteen. There has been "the attrition," or exo-cardiac sound, and now the bulging of the præcordial region, the oscillating carotids*, the distended jugulars, a systolic murmur, and the above physiognomical characters, indelibly mark the disease on one's mind as rheumatic carditis, with a large amount of fluid in the pericardium, which may probably terminate fatally even at this period of the acute stage.

* I should here remark, that I am induced to lay some stress upon this peculiar state of the action of these arteries in carditis, since I have repeatedly noticed it in those acute seizures of inflammation of this viscus which attend rheumatic fever. The stiffened valves on the left side of the heart, the first and early product of endo-cardiac inflammation, with acute pericarditis, will, I believe, produce this oscillation of the carotid arteries. These "floodgates" of the heart are, under such circumstances, unable to perform their office; not only is the rhythm of the sounds altered, but the muscular walls of the organ, and especially the *cordæ tendinæ* of the ventricle, are divested of their well-poised muscular contractility, while the several columns of blood are ejected from the cavity; so that not only is the full rheumatic pulse felt at the wrist, but the central organ of circulation is diverted from its natural force. I do not wish to convey the impression, however, that this oscillation is wholly the result of valvular inflammation, for it is doubtful to my mind whether it does not more commonly denote actual effusion into the pericardiac sac, and that such effusion coexists with endo-cardiac inflammation.

The following case is an instance of the fatal character of this insidious disease:—

RHEUMATISM; ENDO AND EXO CARDITIS; FATAL.

Ann Hunt, aged twenty-four, married, wet-nurse, admitted November 21st. A pale, anxious, and pointed cast of features; owns only to slight pain in the wrist and knees. Some pain on pressure in the epigastrium; vomiting; pulse 110; heart's action strong and loud, attended with a distinct mitral bruit.

Ten days ago was seized with rigors, but has only been confined to her bed three days with the arthritic swellings; does not seem to be aware of having had any sudden pain come in the epigastrium; dares not go to sleep, she says, for fear of frightful dreams.

V. s. ad 3xij. (syncope); hydr. chlor., gr. v. 6tis; c. vin. sem. colch., 3 ss.; inf. digital., 3j.; ex aq. menth. pip. in haustu.

23rd. Cannot lie on the left side; heart's action feebler, and intermitting; dimness of vision; no sleep, and great restlessness; blood buffed. Omit. hst. pt. pil., ung. hydr. fort. cruribus infric. bis die.

28th. This evening she was found much altered, and every appearance of approaching dissolution. The pulse and actions of the heart were scarcely perceptible; extreme restlessness; pyalism*; frequent sighing; bruit heard behind; constant sickness; some crepitation over the lower lobe of the left lung, with extensive dulness on percussion. The following diagnosis was entered in the case-book.

“Partial adhesion of the pericardium; serum in considerable quantity still within it; pleuritic effusion on the left side.”

She lingered on a few days, when the palpitation became more severe, and she gradually sunk, the pulse not being felt for fifteen hours before death.

Post-mortem Examination Twenty Hours after Death.—Pericardium distended with dark-coloured serum; a shred of lymph seen floating in it; three or four distinct patches of thickened and adherent membrane on the surface of the heart, having loose edges, but unattached to the pericardium; the corresponding portion of this membrane was dotted, for the same space, with a series of red puncta; other parts of the heart exhibited the same red appearances, but without any corresponding redness of the pericardium; the vessels of the heart turgid with blood; the mitral valve was thicker than parchment; close to it, and in the auricle, the lining membrane was mammillated, from a deposit of recent lymph which was firmly adherent; hypertrophy of the left ventricle; water passed guttatim from the aorta into the ventricle; the valves of the former were rigid at their bases only; the lower lobe of the left lung was in a state of red hepatization, with serum in the pleuræ.

The mother stated that her son, eighteen years of age, died under the care of Dr. Hue, in St. Bartholomew's Hospital, from diseased heart after rheumatism; and that another son is now (Feb. 4th) under Dr. Latham, in the same hospital, who is seriously ill with rheumatic fever, which has “flowed” to the heart.

* This fact (the occurrence of pyalism, during the unabated violence of the inflammatory action, in serous inflammation, but especially in pericarditis) it has been my lot to observe so repeatedly, during twenty years' hospital practice, that I cannot accede to the proposition which is laid down by some eminent authorities, that mercury is alone to be trusted to in this form of inflammation. Nay, farther, I have witnessed several instances where calomel and opium have been administered at the onset of acute fibrous rheumatism, and whilst there was no appreciable alteration in the sounds of the heart, and where, too, the gums have become touched, and yet, at a subsequent period of two or four days, a “bruit” has arisen, or an attrition sound has been detected, for the first time, although prior to such an occurrence the cardiac region was explored in vain for these auscultatory symptoms. The combination of the above medicines with a grain of the acetous extract of colchicum, administered every six hours, with a drink composed of potas. nit. 3j. dec. hordei oj., has certainly proved the most efficient means in the treatment of the disease in the wards of this hospital, apart from bloodletting, &c.

CLASS II.

Division II. *Thoracic Derangement; Countenance Anxious.*

From Laryngitis.		From Empyema.
„ Tracheitis.		„ Spasm of the diaphragm.
„ Pleuritis.		„ Pleurodynia.

LARYNGITIS.

This disease stands foremost in the above group, for many reasons. The chief one is on account of its formidable character and destructive issue. I cannot suppose that much time need be occupied in pointing out the striking features of this malady. The countenance, and the condition of the respiration through the larynx, will be sufficient guides to the detection of laryngitis when it is once established. There is a sneering dilatation of the nostrils, and a retraction of the angles of the mouth. Distress, anxiety, and suffering; an occasional “fighting” for breath; a pale, livid lip; a glossy cornea; and a fixed eyeball, with some faint touches of lividity over the cheeks, usually portray the features of the disease in its acute form. If the patient talks, it is in a subdued tone, or in a half-whisper; the chordæ vocales cannot vibrate, from intumescence of their mucous surfaces. If he attempts to swallow even his own saliva, or any liquid, the swollen and stiffened epiglottis no longer perfectly does its valve-like office, but a sense of instant suffocation follows the effort to drink, in consequence of the fluid finding its way over the epiglottis into the ventricles of the larynx. The body of the larynx externally is tender, especially over the circo-thyroidean ligament, and where the minuter portions of the vocal organs are situated. The ear applied to the chest detects a great difference between the efforts of inspiration, and the small amount of air which actually passes into the lungs; and the stethoscope, gently laid over the inflamed organ, informs the ear that air passes through the larynx in a small or narrowed chink, by the harsh sound which its passage over this organ produces.* When this disease is fully recognized, the next step to be taken is necessarily its treatment; and here I must allude to the judicious practice followed at this hospital.

A female, aged twenty, stout, and well formed, was lately in the medical wards with this disease. The above physiognomical characters were strikingly delineated. Her throat was covered with leeches repeatedly. She was ordered to take half a grain of antim. pot. tart. every half-hour for six hours; after which it was given at longer intervals, so as to keep up a constant nausea upon the stomach. But another valuable remedy in this stage of the disease was also ordered; it consisted in the application of a large, soft, linseed poultice to the whole of the throat, and a still larger piece of oil-silk over the poultice, so as to cover its external surface, and prevent it from becoming dry and cold; this was renewed every three or four hours. Under such treatment the girl rapidly improved; but the subsequent remedy consisted in the exhibition of calomel, so as to affect slightly the mouth, in order to remove the thickening around the larynx and its vocal chords, &c. She left the hospital quite well at the expiration of three weeks.

But the origin of this disease is often found to have a direct constitutional cause, and to be only the result of some syphilitic ulceration slowly progressing in the ventricles, or else on the edges of the larynx. The following instance under Mr. Arnott, where the operation of laryngotomy was resorted to, will show the insidious nature of the disease, and its pathological character:—

James Stanbridge, aged forty-five, admitted March 10th, with fistulous opening in the urethra, and stricture. Five days after his admission he complained of sore throat, and shortly afterwards he had difficulty in swallowing; the voice became feeble, and he had some distress in breathing. Such was the man’s account to me of his symptoms

* The imitation of this unnatural laryngeal sound is well produced by a person attempting to make a harsh “caw”-like noise in his own larynx, which is done by throwing the air forcibly upon the arch of the palate, without allowing the vocal chords to vibrate, and is very similar to the “hiss” which a cat makes when at bay with a dog.

in their origin, when I first was requested to see him by Mr. Arnott on the 19th. The state of his respiratory system is thus noted down:—Countenance anxious, distressed, and pale; lips rather livid; respirations 40, attended with a gurgling but not with a croupy noise, nearly total inability to swallow fluids, from the sense of threatening suffocation; the fluids “lodge,” he describes it, about the bag of the pharynx, but in reality they do not lodge there at all; the anatomical explanation already referred to informs us that it is simply the spasm of the pharynx, consequent upon the stiffened and immoveable action of the diseased epiglottis. On applying the stethoscope over the larynx, air is heard to pass this organ with a whistling noise. Pain is referred by him to the larynx, especially on its left side. No pain on pressing the alæ of the thyroid cartilage, but there is a great sense of tightness across the lower part of the sternum.* On auscultation, the lungs were heard to be feebly inflated in every part, attended with sibilus here and there.

Diagnosis.—“Inflammation and suppuration going on between the pharynx and larynx; lungs healthy.” Mr. Arnott’s diagnosis, however, extended beyond that which I had made, and it was, that there existed syphilitic ulceration within the larynx itself.

He was ordered to have twelve leeches around the larynx, hydr. c. cret. gr. v. 6tis, and to inhale a weak solution of pyroligneous acid in hot water. On the following day he rambled somewhat; however, he declared himself better, though it was evident that he was in nowise improved. On the 21st, at five A.M., I was called up to see him, his breathing having become worse; his countenance was more sunken; his larynx did not labour in its office, nor did the distress appear to be so confined to the throat as it was to the bronchi; pulse 110, with power; scarcely able to swallow fluids, which rather ooze down than pass by a voluntary act of deglutition; constant delirium; some hard cough. *Hirudines* xx. gutturi; *pt. pulv.* 4tis horis.

At nine P.M. of the above date, the patient was evidently sinking, the breathing was more laboured, but the muscles of secondary action in respiration were not yet brought into use, and it was, therefore, suspected that some of the dyspnoea arose from bronchitis; however, the distress in the larynx was evidently increasing, the patient was becoming more exhausted under the disease, and it was deemed advisable to attempt relief by means of laryngotomy, which was performed by Mr. Arnott at ten P.M. This gentleman divided the crico-thyroid ligament, removed a portion of the cricoid cartilage, and thus left a tolerably large and open wound for the free ingress of air. The man was decidedly relieved from all the urgent symptoms connected with the larynx, and he fell into a calm sleep, with an appearance of great exhaustion. He continued to breathe tranquilly until one A.M. of the 22nd, when the respirations rose to 60; he closed his mouth, and breathed entirely through the wound; no tube was introduced, but he continued to sink, and died at seven, nine hours after the operation.

Post-mortem Examination Fifteen Hours after Death.—The front of the trachea, larynx, and anterior mediastinum was filled with pus, infiltrated throughout the cellular tissue; and on each side of the trachea, but more so on the left, there was a large amount of purulent matter. On the edge of the pharynx, just at its commencement, and where it passes around the top of the thyroid cartilage, there was extensive abrasion of surface, forming large ulcers, which had perforated the muscular parietes of the pharynx, in separate spots, one being on each side of the larynx; and they led into masses of purulent matter, which was dispersed between the crico-arytenoidei muscles and adjacent parts, but it had nowhere entered the cavity of the larynx itself: this organ was sound, and only slightly vascular. Below this spot, however, and through the whole course of the bronchi, the mucous membrane was very vascular, and covered with thin, bloody lymph. The lungs were gorged, but healthy; the pleurae were filled with dark serum.

This operation, by means of a curved trocar and canula, presents many advantages in cases where the patient is in the middle period of life, and where there is not much external swelling of the larynx. The wound made by the trocar is exactly filled by the canula, and therefore no hæmorrhage can take place, and, even if it did do so, the blood could not run into the trachea, because at each inspiration the air is drawn in through the canula, which adjusts

* From some very judicious observations made by Mr. Shaw, which he founds upon a series of experiments on the living and on the dead subject, this invariable symptom in laryngeal obstruction is, I apprehend, to be referred to the tendinous or cardiac, and therefore the least yielding, portion of the diaphragm.—*Vide* “An Address delivered at the Opening of the Classes of the Medical School at Middlesex Hospital,” by Alexander Shaw, Surgeon to the Hospital, and one of the Lecturers. 1845.

itself close to the wound, which its corresponding trocar has made. Hæmorrhage, and suction of blood into the trachea, has repeatedly proved fatal in those instances where a scalpel incision into the larynx has been made in this operation.

But a singular exception to the above plan of operation by the trocar, &c., took place a few months ago in the medical wards.

E. G., aged sixty, was admitted under the care of Dr. Hawkins, with the following symptoms:—

Countenance ruddy, but anxious, breathing with a snuffling noise through the larynx. The epiglottis is felt to be rugged and hard on its edges. Any attempt to swallow food, unless it is done with great care, and in a slow manner, causes a suffocating attack of cough; aphonia. The crico-thyroid membrane is painful on pressure, and the whole larynx feels harder, and more bulky, than natural. Occasional orthopnoea, and severe fits of dyspnoea. Appetite good; pulse tranquil.

Auscultation.—The respiratory murmur is feebly heard throughout the lungs, but the amount of air that enters the chest is evidently so small, that no very decided opinion can be given as to the actual condition of the lower lobes. There is some dullness on percussion in the upper portions of both lungs.

His history was, that two years ago he was a patient in St. Bartholomew's Hospital, with syphilitic sore throat, from which he recovered, with the exception of a weakness in his voice. This last symptom had been gradually increasing ever since, and for six months past he had suffered from severe attacks of dyspnoea, and had been under medical treatment at a Dispensary, with some relief. These fits, however, had grown more urgent, and he sought admission into this Hospital.

It is needless to detail the whole treatment up to the period of the operation,—suffice it to observe that repeated leeching, tartar emetic ointment, and blisters to the larynx were administered, and the system was slightly affected by mercury. The symptoms, however, grew worse from week to week, when a consultation was held; and it was determined to let the poor fellow have the benefit, if possible, of an operation.

Mr. C. De Morgan, the operator, accordingly laid bare the crico-thyroid ligament, and cricoid cartilage, with one incision of the scalpel, and then took a trocar, carrying a canula, and attempted to thrust it through the former membrane; but all efforts to penetrate this ligament were fruitless. Mr. C. De M. then abandoned the trocar, and, with the scalpel and bone-nippers he removed a large portion of substance which proved to be a mass of crico-thyroid membrane and cricoid cartilage, converted into an osseous structure; so that, as the operator remarked to the class afterwards, had he not laid bare the body of the larynx in the first instance, but had simply plunged the trocar against the larynx from the external skin, as some operators have done before, he might have caused serious damage to the organ, and the attempts would have been worse than fruitless, as they would have added to the sufferings of the patient, and the external incision must have been subsequently made. The operation thus performed necessarily left a large and open wound for the free egress and ingress of air.

The patient fell asleep, and continued to do so soundly for many hours. No untoward symptoms arose until within one month after the operation, when slight difficulty of swallowing again appeared. Soon afterwards it was noticed, that particles of food and some drink oozed through the opening when he took his meals. This symptom was succeeded by a puffiness of the neck at the point opposite to the lower portion of the bag of the pharynx on the left side. The food was now forcibly driven through the wound, and kept up a source of incessant irritation, so that he was afraid, and at length declined, to take any nourishment; from this period he gradually sunk, and died from a slight attack of pneumonia, induced by some food, as it afterwards appeared, which had gone down the trachea from a communication that existed with the pharynx. This was two months after the operation. The *post-mortem* examination proved, that there was extensive ulceration of both chordæ vocales and edges of the epiglottis. An ulcer equal in size to a fourpenny-piece was situated on the pharyngeal side of this part of the organ, and it led directly into the bag of the pharynx. Particles of food were found strewed along the trachea and right bronchial division. There was pneumonia of this lung, and tubercular solidification of the upper lobes on both sides.

On several other occasions this operation has been performed by means of the trocar, when the patients were, it may be said, lifeless; that is to say, in one instance of a female, especially, she had ceased to breathe. I was called to her at three in the morning, when I found that impending suffocation was terminating her life; I hastened to the

house-surgeon, Dr. S. Merriman, who rushed out of bed, and, without coat or waistcoat, came into the ward, drove the trocar and canula through the crico-thyroidean ligament, blew into the larynx, and, though she lay like a corpse, yet, when the air irritated the bronchial surface, a convulsive, deep-drawn respiration instantly followed; another, and another, until the livid, ghastly countenance gradually gave place to a flushed cheek and a natural hue. The whole business, from the moment I saw her until the tube was in her larynx, and she was breathing through it, could not have occupied five, or at most seven, minutes. She perfectly recovered. The other instance was in that of an Irish labourer, Dec. 1839, who was suffering from syphilitic disease of the larynx, and which threatened to destroy his life by suffocation, when I was hastily summoned to the man, who was dying, and immediately requested Mr. Tones, the house-surgeon, to use the trocar for the purpose of relieving the larynx. He did so very skilfully. The man instantly whispered, "It is all right now." He never had a single untoward symptom, and he left the hospital to follow his employment; which he continued to do until the early part of last winter, when he returned to us with all the evidences of rapid tubercular softening in the lungs, and died in the course of three weeks after his admission. The larynx is now in the hospital museum, and exhibits those peculiar warty excrescences on its edges, for which disease so many of these cases have demanded the timely aid of the surgeon. The concluding instance of the formation and subsequent exfoliation of bone from the cricoid cartilage is so rare, that I think it worthy of detail, and must refer the reader to the Appendix for the drawing.

I was hastily summoned, on the morning of the 19th March last, to a man who had just arrived at the Hospital, and who, it was stated, was gasping for breath, and seemed to be dying. The morning, it should be observed, was very dull, foggy, and a drizzling rain was falling, with a south-west wind. I found the patient in question, Patrick Grady, a tailor, aged forty, walking about the admission-room in great distress; his countenance was slightly livid, the *alæ nasi* freely acting, and his eyes distressingly wandering about the place. His breathing was performed with strenuous efforts to draw the air through the larynx, which sent forth a stridulous noise—the seat of the obstruction was obviously in this part of the respiratory system. His voice was a mere whisper, the hands and feet were cold, and the pulse small and feeble. His larynx was externally covered with pustules, the result, no doubt, of the potassio-tartrate of antimony ointment. His general appearance was that of a strong, well-formed, and otherwise healthy man. He was immediately sent to a warm bed, and ward, and I desired him to swallow a nauseating dose of tartar emetic in solution. In a few minutes his urgent distress somewhat subsided, when I elicited the following history, in snatches, from him.

Two months ago he suddenly lost his voice, after a slight cold, and he paid but little attention to it until one month since, when he found some difficulty of breathing, especially towards night, and a short harassing cough. He sought relief at the Welbeck-street Dispensary, where he appears to have been judiciously treated. He had gone there earlier than usual on the morning in question, but, not being able to gain admission, he stood on the pavement, when his breathing became so much more distressed, that he walked to the cab-stand, and got into a vehicle, and drove to this Hospital. There had been spasmodic attacks of dyspnoea every night for a week past, threatening to suffocate him; but during the last three days these attacks had occurred with equal severity during the day also. There was some tenderness about the larynx, but not such as to warrant the supposition that active inflammation was then going on.

A consultation was called, when it was unanimously agreed to perform the operation of laryngotomy, to which he readily assented. Mr. Shaw accordingly cut down upon the larynx, the upper point of the incision being opposite to the inferior edge of the thyroid cartilage, and the lower point level to the under surface of the first ring of the trachea; the crico-thyroidean ligament was soon fully exposed, when it was pierced by a trocar carrying a canula, and the latter was left in the larynx. The relief was instantaneous, and most gratifying. The respirations became tranquil, the countenance placid, and of a natural hue; the thorax no longer heaved, and the respiratory muscles ceased to strive to drag in air. The lungs were now heard to fill throughout their whole extent, for it should be observed that percussion and auscultation previously satisfied us that no disease existed in these organs, although but little air passed into them. The epiglottis was also felt by the operator's finger healthy and unaltered by disease. He was placed in a temperature of sixty degrees, and carefully watched by a separate nurse, and ordered hydr. chlor. gr. i. sextis horis, and an effervescing saline draught, with $\frac{1}{4}$ gr. ant. pot. tart.

March 21.—The tube was removed this evening, and some plastic, tough, mucus-like pellets cleared out; and it was then replaced. The double tube was found disadvantageous; for, on attempting to remove the inner one, the toughness of the fibrinous clot around its interior caused so much obstruction, that it harassed him a good deal in getting it out; we were, therefore, contented to keep the single tube only in the larynx.

March 23.—No constitutional disturbance has arisen since last report. There is a copious flow of saliva and mucus from the mouth; his gums are vascular, and there is free exit of mucus from the tube. The absence of all inflammatory symptoms may be attributable in a great measure to the suppuration of the several pustules, already mentioned, around the larynx.

April 6.—He was now allowed to leave the tube out, as there had been a brisk arterial hæmorrhage during the preceding two nights, when it was removed, to be cleaned and replaced. The succeeding week he walked about the hospital garden with an artificial respirator over his mouth, composed of four layers of fine damask linen fastened round his neck; and he is now daily regaining his tone of voice, the wound has nearly healed, and his breathing is quite natural through the larynx. He sleeps soundly; and he says he feels strong and well.

April 16.—The patient exhibited to me this morning a portion of bone which he had coughed up after severe efforts, attended with a sharp pricking sensation over the seat of the cricoid cartilage, since which the pain and cough are perfectly easy. He is very anxious to go home to his work, which he may probably do in another week.

May 1.—The man left the hospital this day, most grateful for the relief he had received. His voice was daily gaining strength.

Whilst treating upon the subject of this operation, I must be allowed to state, that the instance above referred to, where Dr. S. Merriman operated, at my urgent solicitation, with the trocar, &c., at a moment's notice, upon a female in the medical wards, was the first case in which this operation had been thus performed in this hospital, and I believe it was equally unknown in other establishments; but since that period the far greater number of cases, requiring this immediate relief, have been most successfully operated on by this simple, efficient, and easily manageable plan.

Dr. Watson, in his excellent "Lectures on the Practice of Physic," appears to have fallen into a slight mistake respecting the issue of all those cases which have been operated on in this hospital. He classes the adult cases of a chronic nature, for the most part syphilitic in their rise and progress, which have called for the performance of laryngotomy, with those acute and rapidly fatal attacks of laryngitis which have occurred in children, either from the swallowing of boiling water, from croup, or from laryngitis; and he then draws an inference that the operation was unsuccessful in one-half of the number. Now, with all the deference that is due to so eminent a physician, it ought to be considered that these two classes of cases should be no more grouped together, than the chronic diseases of joints requiring amputation should be coupled with those serious lacerations and compound fractures into joints arising from accident, &c., which, from their alarming nature, demand the immediate use of the knife also. It may be fairly stated, that no one operation of laryngotomy has ever been performed in this hospital during the last eighteen years in which the patient has not been decidedly relieved, and has not subsequently done well; three cases only excepted, out of eighteen instances of chronic disease of the larynx and adjacent parts;—and two of these fatal cases were the result of cancerous disease around the larynx, which threatened death by suffocation, from pressure on the vocal organs;—whilst, with these exceptions, they have all survived many months, and even years: the shortest period has been that of four months. But, on the other hand, the instances of an equally large number of cases of laryngotomy performed on children from the above causes, to the amount of twelve or fifteen, over eighteen years, has been unsuccessful; I know not of one single instance where life has been prolonged beyond a few days at the utmost. The question, therefore, of the value of the operation turns upon this point, as I conceive, viz., the chronic disease in the adult, and the acute attack in the young. No unbiassed person can call in question its value in the former; but the propriety of its adoption in the latter class of patients is still a matter of doubt; and, unless a clear distinction is made, between the statistical results of the operation, in the class of chronic diseases on the one hand, and in those of an acute nature on the other, no very useful inferences can be drawn for the guidance of the practitioner.

The following table of cases of laryngotomy, performed at various periods upon patients labouring under chronic

diseases of the vocal apparatus, will show at one glance the comparative relief and prolongation of life which have followed each operation :—

No.	Sex.	Age.	Ward.	Operator.	How Performed.	Character of Disease.	Result.
1	M.	60	Founder's.	Sir C. Bell.	Scalpel only, and removing a portion of cricoid cartilage, leaving an open wound.	Ulceration of larynx and chordæ vocales.	Recovered ; voice nearly restored.
2	F.	46	Seymour's.	Mr. Arnott.	As in No. 1.	A large ulcer in the trachea, near the larynx.	Four months ; died at home from another spasmodic seizure of the glottis.
3	M.	45	Clayton's.	Mr. Arnott.	As in No. 1.	Purulent infiltration around the larynx.	Died in nine hours.
4	F.	40	Regent's.	Mr. Arnott.	Trocar and canula.	Ulceration of larynx.	Recovered, and afterwards transported for larceny.
5	F.	46	Handel's.	Dr. Merriman.	Do. do.	Do. do. do.	Was seen at the hospital a year after the operation, quite well.
6	F.	50	Whitbread's.	Mr. Arnott.	As in No. 1.	Laryngitis occurring in a case of cancer.	Died in seven hours.
7	M.	16	Founder's.	—	As in No. 1.	Ulceration of larynx. Phthisis.	Four months.
8	M.	10	Do.	Mr. Shaw.	Trocar and canula.	Hypertrophic tonsils pressing on rima glottidis.	Now living.
9	F.	35	Queen's.	Mr. Arnott.	Do. do.	Ulceration of larynx.	Lived three months.
10	F.	53	Bird's.	Mr. Arnott.	Do. do.	Syp. dis. of do.	Now living.
11	M.	37	Pepys.	Mr. Tomes.	Do. do.	Do. do. do.	Seven years.
12	M.	60	Founder's.	{ Mr. Campbell. De Morgan. }	{ Ditto, ditto ; removing first a portion of osseous crico-thyroid dean membrane.	{ Do. do. do.	Ten weeks, a fistulous communication between pharynx and larynx. Tubercular excavations in lungs ; pneumonia.
13	M.	50?	Pepys.	Mr. Shaw.	Do. do.	Ulceration of larynx.	Doubtful.
14	F.	4	Seymour's.	Mr. Mayo.	Scalpel only.	Warty excrescences around the rima glottidis.	Blood from the wound rushed, by the deep-drawn inspirations, into the trachea, and the child died from suffocation in a few hours. This unfavourable circumstance is alone a sufficient plea for the use of the trocar and canula. There was pulmonary apoplexy.
15	F.	25	Northumberland.	Mr. Tuson.	As in No. 4.	Acute laryngitis of eight days' duration, rapid exhaustion of vital powers taking place when operation was performed.	Breathed through the canula 14 weeks, when the wound gradually healed, on leaving it out. Left in perfect health, and is now in service in Kemp Town, Brighton.
16	M.	56?	Stafford's.	Mr. Douglas.	Do. do.	Simple pressure on larynx from a huge mass of cancerous disease of the maxillary glands threatening suffocation.	The operation was imperatively called for to relieve the distressing and apparently mortal attack of dyspnoea. Lived three days and a half afterwards ; sunk exhausted by hæmorrhage from the malignant disease.
17	M.	15	Founder's.	Mr. Tuson.	Do. do.	A chimney-sweeper. Croupy respiration creeping on for 18 months.	Three or four months. Ulceration in trachea and larynx ; tubercular disease of the lungs.
18	M.	4	Do.	Mr. Shaw.	Do. do.	Chronic laryngitis of three months' duration. Came to the hospital in a state bordering on suffocation.	Discharged convalescent ; only suffering from slight laryngeal expectoration, the result of exfoliation of bone from the cricoid cartilage.

It is scarcely necessary to refer to the subject of TRACHEITIS or croup. The disease is well known and easily recognized by a discerning eye ; but it cannot be too strongly urged upon the mind of the professional man that, if any ultimate benefit may be anticipated from the operation of laryngotomy in this destructive form of inflammation (and even this is very questionable), the timely use of the knife is of the utmost importance, as the delay of a few hours only may leave the patient beyond the power of all human aid.

In EMPYEMA, the general enlargement of the side where the effusion exists, the bulging of the intercostal spaces, the hectic character of the fever, the absence of respiration and of the patient's voice, the dulness on percussion, and the dead or muffled state of the voice by the hæutophonon are so many indications of the presence of purulent effu-

sion into the pleural sac; besides which, if the disease is present on the left side, where it is ordinarily set up, the heart will be found pulsating under the cartilages of the ribs, rather than under the ribs themselves; so that this viscus lies, if the patient is examined in a recumbent posture, transversely to its natural position, its axis being in a line from the sternum to the axilla, rather than in a line from the mamma to the sterno-clavicular articulation, as in health.

PLEURODYNIA, and SPASM OF THE DIAPHRAGM, are sometimes met with in delicate constitutions, or in persons who are habitually of a bilious temperament. If the hepatic biliary system is loaded, and the stomach receives some indigestible food, such as pork, veal, raw vegetables, iced fruits, or wines, &c., a few hours, or even immediately after the noxious food has been taken, the patient is suddenly attacked with acute pain either in the epigastrium, over the short ribs, or around one mamma. The countenance rarely betrays more than negative evidence in such seizures; there is no actual distress depicted in the features, but the patient writhes from side to side, and is afraid to move or respire deeply on account of the aggravation it causes to his sufferings. I know a medical gentleman, formerly a pupil of this hospital, who was attacked with pleurodynia, and unfortunately he was under the hands of a practitioner who did not recognize the distinction between inflammatory pain and that from mere spasm, and he was made to lose twenty ounces of blood on two separate occasions, without the slightest relief to his sufferings. The pain gradually wore itself out, and I saw him soon after the attack, and could not find the slightest trace of recent pleuritis, by auscultation or otherwise, in his chest. The painful surface could have been covered by a shilling, and was extremely sensitive, so that he could not move in his bed without great distress. A lady, suffering from most violent pain through the mamma to the scapula, was relieved by a full dose of calomel and colocynth, and a purgative saline; but the severity of the pain induced me to auscult the chest, before I could have ventured to have pronounced the attack purely muscular, and not inflammatory.

The physiognomical characters of pleuritis have been already touched upon, and do not require further elucidation; but the third division of this class may now pass under consideration.

CLASS II.

Division III. *Thoracic derangement; Countenance of peculiar hues.*

From Cardiac Disease (Chronic).

„ Hydrops pericardii.

„ Emphysema pulmonum.

„ Œdema „ (engorgement).

From Œdema Pleuræ (hydrothorax).

„ Bronchitis.

„ Hepato-Cardiac Dropsy.

It has been already observed, that since all faces, all forms, and all created beings differ one from the other, not only with respect to their class, their genus, their species, but also with respect to their individuality, so, in like manner, it may be affirmed of semeiology in general, that, although the practitioner may be called to witness a disorder in two persons of the same kind, in the same stage, and of equal severity, yet in their rise, progress, duration, and result, there will not be found two diseases, which have run their course exactly alike, in which each one has not presented some striking peculiarities in pathology which were not common to both.

In the third division of this class we have diseases grouped together which alter the natural *colour* of the face, and give rise to a tint which is foreign to it, and thus a morbid colour of surface becomes a valuable diagnostic sign of the disease which is progressing within. But the varied shades of colour which the physiognomist has to notice and to learn are always attended with more or less alteration in the natural cast of features, so that not only is the change of hue in the countenance valuable in diagnosis, but the distress in the features, which usually accompanies that change, speaks such powerful language to the mind of the physician, that the disease may be read accordingly. It is a matter of great importance, and which is, alas! sadly neglected in the present day, that, when a sufferer from some serious disease presents himself to our notice, he should not be allowed to influence the mind of the medical man by the frequent repetition of trifling or subordinate symptoms; and truly, if an experienced man is able to derive much information from medical physiognomy, the minor points upon which the patient may

lay much stress will not have any corresponding weight in his mind. His first aim will always be this: Which is the morbid or deranged organ? And to what extent has that derangement gone? The countenance will at once declare this in almost all the serious diseases which affect our mortal frame; and, where that disease exists in the thorax, the combined use of auscultation and heautophonics will, for the most part, as fully detect the disease itself, both in its seat, nature, and extent, as though the morbid parts had been displayed before our naked eye.

It may be observed, then, that, generally speaking, the following change of colour in the face attends the diseases here grouped together. In the first place we have those which are ranked under the third division of this class, and I have also gathered together a few others, in order to show the varieties of tinge which different diseases exhibit in the physiognomy.

In Cardiac disease the countenance is livid.

Emphysema	”	dusky.
Hydrothorax	”	anxious and dusky.
Hydrops pericardii	”	livid and anxious.
Malignant disease	”	sallow.
Icterus	”	yellow.

In Pneumonia the countenance is of a dingy flush.

Pleuritis	”	pale and anxious.
Bronchitis	”	dusky and livid.
Œdema pulmonum	”	heavy and distressed.
Tubercular disease	”	wan and pale.
Entozoa	”	wan and pinched.

Now, with respect to the varied *stages* of CARDIAC DISEASE, whether those changes are in its muscular parietes, or in the valvular apparatus; whether the auriculo-ventricular openings are gaping, or morbidly contracted, in the alternate systolic and diastolic actions of this viscus; or whether its investing membrane is adherent to it, and its large vessels dilated and thin; yet one general observation holds good with respect to the physiognomy of individuals who suffer from disorder in the action of this important viscus, namely, that the features, as well as the hue of the face, sooner or later, undergo a marked change from a state of health. There is also a peculiarity in the dyspnœa, or distress in breathing, in *heart-diseases*, not corresponding to the same distress in *pulmonary* diseases. It will be found generally true, as a rule, that difficulty or shortness of breath, in diseases of the heart, occurs whilst the patient is in bed, or even when he is asleep, as well as from any exertion of body; whereas the same distress, in diseases of the lungs, occurs in the upright posture, and especially on the least exertion, as in walking, talking, or sitting forward, &c., but it is never aggravated, in paroxysms, whilst in the quiescent state in bed.

The explanation of these facts appears to be simply thus: in cardiac disease there is a delay in the blood throughout the chambers of this viscus, and hence we may notice that pulmonary congestion ensues; whilst, in pulmonary disease, the delay is primarily in the capillary circulation of the lungs themselves, and this congestion is aggravated by excitement or by an exertion of these organs. The latter dyspnœa is partly from mechanical causes; whereas the former arises, as Williams of Liverpool and Kay have shown, “because the venous blood has failed to penetrate the substance of the lungs, and is no longer delivered to the left side of the heart in sufficient quantity to maintain the circulation*.” Hence it is an important question, and to which we should contrive to obtain an explicit answer from our patient, “Does your shortness of breath come on in fits, whilst you are in bed or asleep, or is it *only* worse when you move about, or pass from a warm room into the cold air?”

The countenance of a person labouring under exo-cardiac or endo-cardiac inflammation is certainly oftentimes very peculiar to the disease itself; there is a greasy look about the face, and an expression of distress in the features, which is better known to, and sooner recognized by, a clinical observer than it is possible to describe; whereas, in the chronic forms of disease of this organ, the palpitation is both seen and felt by the medical man; and he may also notice the anxious, careworn, distressed look, with livid or dusky-red lips and nose, the *alæ nasi* acting on the slightest exertion, so that this engine is no sooner disordered in its movements, than the features exhibit the distress which arises therefrom. The patient, moreover, seeks an erect posture in bed; the eye is anxious; the cheeks are faintly tinged with purple; the jugulars are permanently distended, by which I mean that they do not relax either in the act of inspiration or expiration; there is an oscillating movement of the carotids in

* Vide Alison's *Outlines of Physiology*; also *Edin. Med. and Surg. Journal*, vol. xix. and xxix.; and Kay's *Treatise on Asphyxia*.

the triangular space formed by the sterno-cleido and omo-hyoidei muscles*. There is also a manifest bulging of the præcordial region, and the whole pectoral muscle on this side feels fuller, larger, and more plump than on the right side.

I shall transcribe one, out of the many instances of cardiac disease, which I have in my possession, in order to show the progressive stages of endo-carditis, and its influence upon the several organs of the thorax and of the abdomen. The following case is the more instructive, inasmuch as we had the opportunity of watching it from its onset to its fatal termination:—

Mitral Valve closed to a mere Chink.—*Pulmonary Apoplexy.*—*Dropsy.*—Wm. Edsir, aged thirty-seven, a baker, admitted Oct. 6th. Face bloated; lips and cheeks full and pinkish; alæ nasi acting; hands livid and cold; slight yellow tinge under the eyes; orthopnoea; dyspnoea occurring in paroxysms; abdomen full, and with fluctuation; hardness and tenderness in the epigastrium; pulse 100, feeble and small; urine scanty, turbid, but contains no albumen.

Auscultation.—Free transmission of air throughout the lungs, attended with rhonchus and sibilus in the lower lobes. A loud rasping bruit attends the first sound of the heart, otherwise the heart is not noisy or forcible.

He states that, ten years ago, he was in this hospital, under Dr. Peter Mere Latham †, for acute rheumatism; but although he had, at that period, no affection of his chest, yet, just after he left the building, he became sensible, for the first time in his life, of shortness of breath, though he had no palpitation. He received great benefit at this time by the application of leeches and cupping to the region of the heart and liver, together with the use of the salts of acetate and carbonate of potash in the compound infusion of scopolarium. The lin. hydrargyri was rubbed into the side, and, although it brought on ptialism, yet it afforded great relief to his symptoms; and the kidneys, which before were very obstinate, now began to secrete largely, and thus relieved him of the accumulated fluid in the abdomen, legs, &c., so that the orthopnoea had greatly subsided. He was, therefore, made an out-patient, at his own request, in order that he might go into the country. The following note, however, was taken down before his departure, Nov. 18th:—

“*Auscultation.*—Rhonchus and sibilus over both sides of the chest, heard chiefly during expiration ‡. Large crepitation over both lower lobes behind; expectoration frothy; the sound of the heart, which has never altered, seems more audible under the sternum than on the left side. Five beats of the heart occupy one respiration, the two beats that accompany the inspiration are more loud as to the ‘bruit’ (which then becomes almost vocal) than the other three. Says he gets better every day; abdomen less tense, but still fluctuates; countenance bright; legs quite reduced in size; urine clear, acid, but no albumen; sleeps well.”

The following January 15th he returned from the country, where he became worse in consequence of catching cold on the journey. Abdomen more swelled and painful; œdema of legs increased; dyspnoea severe; has pain in the right shoulder; pulse small (it is now, and always was, quite regular); urine thick and scanty; the “bruit” is the same. As he did not wish to remain in the hospital, but to return to his family, he was allowed so to do on the 19th; but information was brought to me in another week that he had died, after having spat a large quantity of blood. Permission was readily granted to perform the *post-mortem* examination in twenty-four hours afterwards.

* This pathological condition of the large vessels of the neck depends upon a gaping auriculo-ventricular opening, so that not only is the mitral or tricuspid valve unable to close itself, and thus render the two chambers distinct and separate, but there is likewise, in consequence of this imperfect closure, a column of blood always remaining in the auricle and in the large vessels; by which means the latter are never capable of being thoroughly emptied.

† This gentleman was then physician to the Middlesex Hospital.

‡ These sounds, peculiar to bronchitis, are usually heard during inspiration; but where they are heard, as in the above instance, during expiration, it denotes intumescence or œdema of the whole mucous membrane of the bronchi, and is a much worse symptom than the former. This membrane is reflected from tube to tube, at their several bifurcations, just in the same manner that the skin, at the bases of the fingers, is reflected from the bottom of one phalanx to its adjoining phalanx, so that, whenever any ropy mucus is secreted from the membrane, it is driven upon this œdematous angle of the bronchus, and thus gives rise to these sounds, whilst the air is forced over them in expiration. I observed that it is a much more serious condition than rhonchus heard during inspiration, because the latter physical sign merely denotes slight irregularity in the bronchial surface from inflammation; whilst the former cannot occur without some effusion under, and thickening of, the membrane. I have frequently witnessed a sudden attack of suffocating dyspnoea supervene from this fierce irruption of bronchial œdema, and when it occurs in combination with cardiac disease, or with emphysema of the lungs, it frequently carries the patient off in a very few hours. The difficulty of breathing under such circumstances does not arise from any trouble to inspire, but from the inability to expire; the air cannot force its way out; so that the expirations are threefold more laboured and prolonged than are the inspirations.

Thorax.—Pleuræ filled with citron-coloured serum, as well as the pericardium. Lungs not adherent, and healthy, except the whole lower lobe of the right, which was one mass of pulmonary apoplexy, cutting like damson cheese; there were also several isolated portions in its vicinity, and some few dispersed through the same lobe on the left side.* The heart was large; bead-like vegetations, or warts, were on the edge of the tricuspid valve; the left ventricle was not much increased in capacity, but a deposit of bone was found on that part of the mitral valve nearest the aorta, whilst, looking at it from its ventricular side, a thimble-like projection was seen, rendering altogether the aperture a mere chink, so that water only dribbled through. The semilunar valves were shaggy, with similar wart-like vegetations on their edges. Polypous clots were entangled in the carnae columnæ.

Abdomen filled with the same kind of fluid as the pleuræ; some recent lymph glueing the diaphragm and liver together. The latter was large, with much congestion of the hepatic veins and biliary ducts; the congestion, however, was chiefly portal as one approached the surface of the organ. The kidneys presented a perfect specimen of "Bright's disease."

In *HYDROPS PERICARDII* the countenance is more anxious and distressed than in mere valvular disease; the orthopnœa is greater, the *alæ nasi* are more active in the respiratory movements, there exist more fulness and greater dullness over the præcordial region than in the chronic forms of cardiac disease; whilst the sounds of this organ are distant and less marked to the ear: by the use of the heautophonon we may, however, pretty well judge of the extent of the effused fluid, and of the boundaries of the distended pericardium.

Whilst in *HYDROTHORAX* or *DROPSY OF THE PLEURÆ*, which not unfrequently attends the former effusion, the orthopnœa is not only severe, but the dullness on percussion is so marked, and the auscultator's vocal sounds are so manifestly altered over the seat of the fluid, that a mere novice in the school of auscultation can easily attain to a knowledge of the diagnosis of this form of thoracic disease. Neither is the recognition of unmixed or mere emphysema a difficulty. The barrelled chest, the clearness of percussion, the absence of a pure respiratory murmur, the hernia of the lung, shortly to be described, and, above all, the strong physiognomical characters of this disease, are so many illustrations of the morbid changes of the lung, that I feel assured, if medical men would only attend to these few simple principles in diagnosis, emphysema would be much more easily recognized than it generally is. But, when to this change in the pulmonary texture there is superadded either dropsy of the lungs or of the pleuræ, or of both, and the case is somewhat more obscure, then the countenance is haggard, distressed, and dusky; the respiratory efforts are more laboured, and the auscultatory signs are more perplexing to the physician. The dullness on percussion, from the presence of fluid in the thorax, masks the tympanic sounds which emphysema would yield, and I know of no decided test which will enable us to ascertain that this complication of diseases exists, except by the use of the voice of the patient, and by that of the auscultator. The former test is a negative evidence, and the latter is a positive one. When the ear is placed over such a chest behind, and the patient is encouraged to talk, the sound of his voice, and the thrill or vibration of that sound, are neither of them heard nor felt by the operator's ear or head. But, on the other hand, if the heautophonon is placed over the same spot, the practitioner's voice becomes muffled and deadened, just as it does when he talks with his mouth surrounded by a wet blanket or by a feather pillow. I am aware that these physical signs are also met with in empyema of the chest; but this presents no difficulty whatsoever, inasmuch as the rise, progress, and symptoms of the last-mentioned disease in no wise correspond to those of emphysema, coupled with fluid in the lungs and pleuræ, so that an observer will be at no loss to form a diagnosis between the two.

EMPHYSEMA PULMONUM, or, that condition of lung which is produced by the escape of air from the cells of the lung into the cellular membrane which connects these cells together, is usually one of the main features of disease

* This is one of those numerous proofs which we have of the true pathology of pulmonary apoplexy. A diseased and obstructed mitral valve on the one hand, and a consequent delay in the circulation of blood in the pulmonary veins on the other, invariably coexist in producing this morbid change. Portions of blood escape from the vessels the most remote from the heart, and the columns of inspired air force these extravasated portions from cell to cell, so that isolated masses of lung become solidified from such an escape of fluid into their texture, whilst the efforts of coughing dislodge other portions, and they are brought up with the expectoration. This judicious explanation of pulmonary apoplexy was first given, and pointed out to me, by our late physician, Dr. Watson, who speaks of it in his valuable Lectures on the Practice of Physic.

in asthmatical patients. These individuals always exhibit the very opposite state of respiration to that of a person suffering from pneumonia or pleuritis.

The thorax in this disease is acting at every point; the whole set of respiratory muscles are in full play; the shoulders are prominently thrown forwards, the clavicles, as it were, buried behind them, and the diaphragm and abdominal muscles take an active part in the efforts of respiration; added to which, if the eye glances over the chest before and behind, whilst the trunk is erect, there will be a manifest and universal bulging of the ribs, so that the front of the thorax is rounded like a barrel; and this convexity is so great, on viewing the posterior parts of the chest, that a flat, narrow board or ruler, laid over the ribs, will leave a considerable space in the region of the spine, and show that this bony canal is considerably lower than the convex surfaces of the ribs. More need not be said upon this branch of the subject, as such alterations in the parietes of the chest must be quite as palpable, at one cursory glance, as any other deviation of symmetry in the form of the thorax from disease within its walls.

But notice ought here to be taken of a fact which will help to a decision on the nature of this disease, before the ear is placed on the chest of such a patient. It is this: that if there is emphysema to any extent, and it has reached the upper lobes—for emphysema usually begins in the lower lobes, and spreads upwards—each act of coughing produces “hernia of the lung,” so to speak, in that triangular space which is formed by the clavicles, sterno-cleido, and omo-hyoidei muscles. At this point, and at this point only of the thorax, we know that the pleura is wholly unprotected; and, as the lungs are jerked up by each distressing effort of hard coughing, the emphysematous portion and pleura are forced up into this triangular space, and may be seen as one distinct tumour. This appearance alone has often enabled me to form a diagnosis of a pair of emphysematous lungs before I had even applied the ear to the chest.

It has been already stated, when treating of the morbid respirations in asthma and emphysema pulmonum, that the voice becomes altered, is sharp, shrill, and loud; and it may here be observed, also, that such patients are usually very loquacious in the description of their complaints; there is a propensity in them to talk in long, unbroken sentences. The reserved air in the emphysematous lungs, if one may so term this pent-up or extravasated fluid, enables them to do this. Expiration is not the chief distress which gives rise to dyspnoea, for such an act is not a very laboured effort; but it is the prolonged and distressed effort to *inspire* which is the main feature in the dyspnoea of this class of patients*.

Whenever the bronchial mucous membrane has been the seat of repeated attacks of inflammation, there is an intumescence and thickening of this surface, which renders it liable to fresh outbreaks of bronchitis, and the individual is very prone to suffer on the slightest alteration of temperature, and from increased moisture in the atmosphere. If such a patient gets ill fed, overworked, keeps late hours, and is exposed to foggy, damp weather, another and a far more serious train of symptoms arises, which have carried off a large number of the poorer classes during the late inclement winter. I allude to **DROPSY OR OEDEMA OF THE LUNG**. This disease arises from a sudden effusion of serum from all the pulmonary cells, and from the emphysematous portions especially. Expiration now is a most distressing act, and it is performed with unusual exertion; the morbid sounds accompanying this disease are chiefly heard as the patient strives to get rid of the compressed air, so that it drives the viscid secretion of the bronchi against those reflected portions of the mucous membrane which pass from tube to tube in their divisions,

* The very opposite condition of voice, respiration, and manner of answering the questions put by the medical man, may be noticed in pneumonia, pleuro-pneumonia, and pleuritis, as contrasted with emphysema. The patient, in the former diseases, fears to talk; the voice is subdued, as not much air is allowed to be thrown upon the larynx; in short, he has none to spare, we may say; and, as he attempts to answer your questions, there is an abrupt monosyllable or two uttered, and he stops before he has scarcely framed or uttered a small sentence. Nurses, the most experienced, cannot divest themselves of the notion that such patients are either peevish, obstinate, and are *resolved* not to answer; or else that they are deaf, and cannot *hear* medical queries; or, lastly, that they are muddled (a phrase denoting with them incipient delirium), and cannot *understand* the questions. But, really neither of these suppositions is correct; and when nurses have begun to scold such patients for not answering the doctor's questions, especially in auscultating the lungs, when you desire to listen for vocal sounds, as *œgophony* or *bronchophony*, I have usually insisted upon their being silent; have desired the patient to cough; and the lungs have thus refilled to a greater amount than before, and they have then been enabled to expend more breath, and so to answer questions in a more prolonged manner.

and thus the air impinges upon this tumefied membrane, and produces various modifications of tone, known as wheezing, snoring, whistling, squeaking, &c. &c.

In this disease, the thorax presents to the eye but little difference from the foregoing changes, except that there is no hernia of the lung visible, neither is there so much convexity of the whole thorax as in emphysema. The eye gathers but little additional information from this change of structure beyond the former disease.

By dropsy of the lung is meant that fatal malady so often complicated with emphysema, in which, after protracted struggles of the respiratory organs, the whole capillary system of the lungs suddenly pours out fluid into the pulmonary cells, but more especially into the tissue connecting these cells together. It is not the engorgement or serous infiltration of the first stage of pneumonia, but a thinner aqueous exudation into the cellular substance of the lung itself; for serous effusion from pneumonia proceeds from the inflammatory vessels which are spread over the vascular air-cells themselves, whilst this exudation is almost wholly from the inter-cellular vessels, and by its rapid accumulation it cuts off the medium of oxygenizing the blood through endosmosis, it drowns the pulmonary tissue, renders it useless, and death ensues from apnœa.

The following instance will exhibit the ravages of this serious disease :—

A man, by trade a painter, was lately admitted here in the forenoon, and as he was in the act of getting out of the cab he expired. The fellow-workmen who accompanied him declared that he had been doing a hard day's work, and had continued at it until ten o'clock the preceding night; that they had heard him make no complaint, but that, on the morning of his death, he went to work as usual, when he said that his asthma, to which he had long been subject, was so bad that he should leave off, and go home; however, they insisted on his seeking for advice, and accordingly they brought him here, as already mentioned. The lungs, on examination of the body, were found gorged with fluid; did not collapse on cutting into them, and an enormous quantity of clear serum oozed out from every part. There was emphysema also, but no disease of the pulmonary texture beyond this change. The lungs presented a sodden appearance, just as if they had been kept soaked in water to the first stage of putrefaction.

DROPSY OF THE PLEURA, or HYDROTHORAX, is simply an effusion of serous fluid from the pleuritic capillaries into the cavity of this membrane. You will find the patient usually sitting upright in bed, or preferring to do so, if he can conveniently, either propped up by pillows, a bed-chair, or otherwise choosing to sit up all night by the fire. As this disease is the sequel of some antecedent though relative and serious morbid change in the respiratory organs, as the heart or lungs, so the eye of the practitioner gathers more information from noticing the *posture* of the patient than from any particular change in the symmetry of the external parietes of the chest. This state of breathing, called orthopnœa, is always present in dropsy of the pleura, and, in addition to it, the lower parts of the chest are passive in respiration.

The attention of the reader should now be drawn to the main facts which are to be gathered from an ocular examination of the thorax and abdomen in three or four, at least, of the most formidable diseases of the respiratory organs: 1. Pneumonia, or pleuro-pneumonia. 2. Pleuritis. 3. Phthisis. 4. Emphysema, with or without dropsy of the lung.

In the first instance the surfaces of the air-cells are acutely inflamed; the air entering them is a source of irritation, and aggravates the patient's sufferings; therefore he is *unwilling* to admit it, at least no more than he is absolutely obliged to do.

In the second instance he is unwilling to do so, *not* because the air-cells are irritated thereby, but because the full expansion of the lung over the pleura distends this inflamed membrane, and thus increases his distress.

In the third case the patient is *unable* to expand his chest, and to allow a natural amount of air to pass in, because the solidification of the lungs on the one hand, and the firm adhesion of these organs to the walls of the chest on the other, render it impossible for him to inspire the same amount of air as a healthy individual does.

Whilst, in the fourth instance, the respired air is wasted by its escape from the ruptured air-cells, and is spent over the interstitial cellular membrane connecting the air-cells together; so that, although the patient is both willing and able to respire more than an ordinary column of air, yet, by his struggling efforts to do so, it is manifest that

little air is actually employed in oxygenizing the blood, and that his sufferings are increased by the lungs being kept permanently distended.

It may be considered rather abrupt to turn from the consideration of the stages of diseases of the thorax to those of the eye; but the analogy appears to the writer to be so great, that he cannot forbear the attempt to draw the same, premising, however, that the eyelid and iris are to the globe of the eye what the muscles of respiration and ribs are to the lung.

If the eye is acutely inflamed, the lid and iris co-operate to exclude the light. If the lung is inflamed, the respiratory muscles diminish as much as possible the *quantity* of air inspired.

If the eye is the seat of an adherent iris, or of cataract, the light cannot get into the posterior chamber, as heretofore, on account of the physical change in the anterior chamber; so, in tubercular solidification, the air *cannot* get into the lungs, on account of physical changes in them.

Whilst in amaurotic patients the light is freely admitted, but, as it falls upon a diseased retina, it affords no assistance to the faculties of the mind, so it is, *cæteris paribus*, with emphysema, the air enters the lung, but affords little help in the process of oxygenizing the blood, and carrying on healthy life.

Thoracic diseases are usually acute in their origin, rapid in their progress, destructive in their issue, and so perplexing to a person unaccustomed to the constant use of auscultation, that any assistance offered to the faculty of sight by enabling the mind to detect more readily the true seat of these acute diseases must prove a help; besides which, some of the diseases already enumerated are so painless in their nature, so insidious in their progress, and so difficult of detection, without the combined exercise of the senses of sight, hearing, and feeling, together with heautophonics, that, as has been already remarked, a mere interrogation of a man's sufferings tends but to confuse the mind rather than aid it in arriving at a correct diagnosis of the patient's complaint. This is especially the case in those diseases already enumerated, such as phthisis, emphysema pulmonum, œdema pulmonum, hydro-thorax, or œdema of the pleura, and bronchitis.

In summing up the amount of information which the study of heautophonics will afford us in the detection and accurate diagnosis of thoracic diseases, it will run thus:—

1. That, if the ear of the heautophonon is placed over a portion of lung which is solidified, the voice of the speaker becomes sonorous, vibrating, and more resonant.

2. If the pleura is filled with fluid, the voice of the operator is muffled; there is less vibration of tone upon the chordæ vocales than under a healthy lung.

3. If there is a tubercular excavation which is nearly dry, the voice in the heautophonon rises, is shriller, sharper, more nasal, than in the first instance.

4. If there is permanent distension of the lungs from emphysema, the heautophonon elicits a dull sound, and which, if long continued, gives rise to a painful sensation at the centre of the operator's sternum; just the very opposite effect, however, is produced by repeated and long-continued use of the instrument over a solidified lung: in this case the forehead of the operator becomes jarred, from the reverberation of sounds, which the various sinuses in the head and face greatly augment, so that a novice in this curious study will find himself occasionally suffering from weight and distress over his brows, if he uses the voice too much over solid substances, for one continued period of time.

But another singular feature in the use of the heautophonon in solidification of the lungs is this: that the patient *feels* and *hears* your voice in the chest, and the extent to which he does so will always correspond with the extent of the solidification. There was a striking instance of this fact on two occasions during the week. A man, large, bony, and well formed, on whom I used the instrument, laboured under severe cardiac disease, a double bruit, intermittent pulsations, large and distended jugulars, with a short and harassing cough. I had never ausculted his lungs, but was so convinced that all his ailments in the chest resulted from the advanced state of cardiac disease, and that the cough was the effect of delay of blood and of pulmonary congestion, the sequel of valvular disease, that I was greatly perplexed at the following incident:—I went into the ward, and applied the heautophonon upon the præcordial region, in order to gain further information upon the alterations of heautophony, over such an extensive

surface as that which an immense heart would doubtless furnish my ear. I suddenly shifted the instrument to the subclavicular region of the same side, and again talked, when the shrill heautophonic rise was most marked. I was surprised at this, and, passing over to the opposite subclavicular region, I again talked, when the shrillness of voice ceased. Was it possible, thought I, that pulmonary excavations can exist in such a subject? I repeated the experiment several times, and at length I ausculted him with my naked ear, and with the stethoscope, when pectoriloquy, amphoric or cavernous breathing, and slight gargouillement on coughing, were so manifest, that several students, who knew nothing of the spot where disease was suspected, ausculted his chest, and each one pronounced the existence of a cavity under the left clavicle. But the man observed, that he heard our voices go through his chest to the inferior edge of the scapula, which evidently denoted that there was some extensive tubercular solidification of the lung around this cavity.

The second instance was in that of a female, who obtained admission on the 22nd of June, on account of some severe dyspeptic symptoms. When she was visited this morning by us, I noticed her extreme emaciation, as her chest lay uncovered; and, on applying the heautophonon before I ausculted her, I pronounced that there was disease under both clavicles, but that a cavity existed under the left. We now proceeded to auscult her, and marked pectoriloquy was heard under the left, and a faint sound of the same kind under the right, clavicle. There was amphoric breathing under the former, and an absence of vesicular breathing under the latter spot. She observed to some gentlemen who stood around the bed, that she felt the voice, as we spoke, strike through her chest on both sides; thus satisfying my mind, still further, that solidification existed in both lungs.

It has been already stated, that in addition to the diagnostic aid obtained from the sense of hearing, seeing, and speaking over the chests of persons labouring under diseases of the respiratory organs, there is still much valuable information to be derived from the sense of feeling. Before proceeding to notice this subject, let me add, that it cannot be too deeply impressed upon the minds of the younger branches of the profession, that the less a patient suffering from derangement, or disease in the respiratory system, is allowed to take any part in describing his symptoms, or in answering cross-examinations, concerning the rise and progress of his complaint and his present sufferings, the more accurate will be the diagnosis on the part of the student, if these senses are brought into full exercise by him, inasmuch as the patient is relieved from a painful and tedious exertion, and oftentimes the information given by him is so confused and unsatisfactory, that it tends to mislead rather than to aid a physician in forming a correct knowledge of the existing disease. It has frequently been the source of much gratification to me to have been enabled to arrive at an accurate diagnosis in some thoracic complaints, whilst the patient has scarcely been interrogated more than once or twice during the whole examination. The valued helpmates in these investigations have been physiognomy, heautophony, auscultation, percussion, and the sense of feeling.

With regard to the sense of touch or of feeling, it may be observed, that, whenever there is increased resonance of the voice, or bronchophony, from solidification of the lung, whether such solidification is the result of tubercular deposition or of hepatization, yet there is *felt*, when the flat hand is laid on the chest over the suspected portion of diseased lung, a vibration or thrill, as the patient talks, especially in the sonorous voice of a male patient; and oftentimes I have thus detected the presence of solidification of one upper lobe, by placing the hand under each clavicle of the patient whilst he has been freely describing his case, in its origin and progress: the vibration being manifest to the hand under one clavicle, whilst it has been altogether absent under the other. The subsequent auscultation of the individual has confirmed the discovery thus made. So, likewise, if the fingers are placed over the posterior surface of the chest on each side, in solidification of one lung from pneumonia, a vibratory thrill is communicated to the hand; you may be said to *feel* the bronchophony or resonance of the voice. Whilst this vibration is felt over the solidified lung, there is a negative, and equally valuable evidence obtained from the sense of feeling, when effusion of air into the cells, or fluid into the pleura, exists. The natural rhythm of the voice is then not only diminished, but there is often a total absence of any vibratory sound to be felt over the effused surfaces of the lung or pleura. When the patient talks and the ear is applied, the vibration, in the former instance, gives rise to bronchophony, and, in the latter case, the *non*-vibration of the voice leaves us with a negative evidence not less valuable.

The assistance afforded me by thus "feeling for diseases," in a few instances of phthisical patients, who have had some dread at the suspicion of the real nature of their complaint, and have consequently hesitated to submit to auscultation, has helped me more than I can well express; and by the time I had obtained a tolerably accurate knowledge of their symptoms, and had almost made up my mind, from the physical signs already alluded to, respecting the real state of the upper lobes, they have almost unconsciously allowed me to apply the stethoscope, and thus verify my preconceived notions of their malady.

HEPATO-CARDIAC DROPSIES are of such frequent occurrence, and are so repeatedly combined, that it may be said that the one disease rarely exists without the introduction of the other. Disease of the heart generally leads on to such hepatic derangements, that inflammation of the vaginal sheaths of the lobules, thickening of these sheaths, and pressure upon their inclosed lobules, gradually supervene. It is not to be doubted, however, but that an active form of inflammation is frequently set up in the delicate ramifications of the capsule of Glysson itself, whereby the various parts of this membrane are left hypertrophied, and portal and biliary congestion are the results; this morbid change is the common effect of that excited state of the mucous membrane of the stomach and duodenum, under the influence of which gross livers and spirit-drinkers are continually liable to, whether such effects are produced by the direct application of highly seasoned food or of ardent spirits to the mouths of the ducts of the duodenum, or whether they are the consequence of the introduction of spiced viands, or of alcohol, indirectly into the system, is not easy to determine. If the vaginal processes of Glysson's capsule, which is a cellulo-vascular membrane, become thickened, that morbid action will then extend itself to the minutest ramifications of the lobular vessels, so that the secreting biliary plexuses will soon become involved in the general disturbance. Where cardiac disease is alone the source of dropsy, the effusion shows itself in those parts of the body most remote from the seat of the disease. Edematous ankles, cold extremities and a mottled state of skin, are some of the early physical indications of this disease; but, when the liver is the main source of dropsy, we usually find the abdomen tense, swollen, and painful in the epigastric region, before the legs partake of the effusion. Percussion will also afford us information of the dimensions of the liver, and its relations to that of health.

The following case of cardiac dropsy exemplifies the above remarks.

John Moren, 40, upholsterer, admitted June 3rd. Countenance thin and jaundiced; features pinched; œdema of the lower extremities; abdomen large, without perceptible fluctuation; fulness, hardness, and tenderness under the epigastric and right hypochondriac regions; orthopnœa; dyspnœa on exertion; pulse 80, small and feeble; cough, some expectoration; tongue pale and flabby, moist, but covered with a thin white fur; urine diminished, high-coloured, but contains no albumen. Has a sore on each ankle by blisters applied there; acknowledges that he is a hard spirit-drinker.

Auscultation.—Right lung—*Front*: Free and vesicular breathing everywhere above the mamma; crepitation everywhere below. *Behind*: Respiration only audible for the space of two inches along the spine; great resonance of the voice along the scapula; bulging of the ribs on this side; percussion dull where respiration is not heard. Left lung—Free and vesicular in every part; a loud "mewing" is heard in the course of the aorta from its origin, which diminishes towards the apex of the heart, but is loudest at the top of the sternum.

On the 16th the following note and diagnosis were entered in the Case-book:—"Expectoration deeply tinged with blood; respirations everywhere attended with slight rhonchus, throughout the right lung, with some crepitation; the cardiac sounds unaltered; œdema increasing. Partial condensation of the right lung, with pleuritic effusion; pulmonary apoplexy; hypertrophy of the heart, with advanced disease of its inner membrane; liver hard, but not abnormal in size." He died on the 22nd.

Post-mortem Examination.—*Chest*: Veins enormously distended with blood; traces of old pleuritis, and a pint of deeply coloured fluid on each side; trachea pale; bronchi gorged with serum; upper and middle lobe of right lung loaded with sero-sanguinolent fluid; lower lobe solid and heavy, sunk in water, and presented a dirty-red colour*. In the centre of this lobe there was a distinct apoplectic portion, and in the lower part were several spots

* Vide Laennec, t. i. p. 396.

of a similar character. No fluid escaped on slicing pieces of the lung in the neighbourhood of the apoplectic portions, and a distinct line of demarcation was seen between the hepatized and the apoplectic portions. Left lung universally crepitant, though gorged with serum*. Pericardium contained ten oz. of dark serum; heart increased to one-half its usual size; the right auriculo-ventricular opening was doubled in its capacity, but not hypertrophied in its walls; the endo-cardiac lining, as well as that of the vena cava, was so opaque and citrine-coloured, that it gave to the latter the appearance of an aorta; beyond a few scattered patches of thickened membrane, nothing further was observed throughout the heart, but just above the orifice of the right coronary artery there was an excavation, as that of an old ulcer, with thick, hardened edges. From this spot to the end of the arch of the aorta, this vessel was enormously distended, having two more similar excavations—one, an apparent aneurismal pouch—but adjoining each other, and occurring before the branches were given off. The membrane was every where much thickened, but the edges of these two sacs were not defined, as in the former one.—Abdomen contained a gallon of serum; the liver was much increased in size, but the lobules were hard, hypertrophied, and pale, surrounded by vascular portal vessels, the quondam “nutmeg” liver, so called. The kidneys were healthy.

CLASS III.

Division I. *Emaciation of frame; Countenance of peculiar hues.*

From Malignant Disease.	From Cancer of the uterus.
„ Tubercular do.	„ „ „ rectum.
„ Cancer.	„ „ „ mamma.
„ „ of the stomach.	

In treating of those diseases which have been grouped under the above classification, it may be observed, that the physiognomy, in an especial manner, is a valuable guide to the detection of these internal disorders. The countenance of a patient, although a fruitful source of information too much neglected, nevertheless presents a very characteristic token in many diseases; and, in the class which is now about to be treated of, it affords to the experienced physiognomist a most important help to diagnosis.

The great art in this study, I may repeat, is to separate the principal features with which it is of importance to be acquainted; for as certainly as effect follows its own cause, so, whenever an appropriate feature or cast of features is significant, the accessory traits or symptoms of the disease will be so also; for a phthisical countenance will announce a tubercular pulmonary excavation as certainly almost as if the morbid parts were displayed before the eye.

The modification of a disease, and the particular combination and mutual influence of its symptoms, produce such a character and alteration in the system, but especially in the features, that the physiognomist may oftentimes read in the appearance of his patient, not only the disease itself, but even its seat, its stage, its extent, and its probable issue.

Now, in the diseases grouped under the first division of this class, the usual prominent and characteristic feature is a wan or a pallid countenance. There is a tendency in malignant disease, as soon as it is fully established in the constitution, to rob the vascular system of its red globules, and, therefore, the peculiar change in the colour of the face is the first evidence which we may notice of the existence of such a malady.

It is a question in pathology, which has not yet received a satisfactory explanation, whether, this pallor of the whole system is the cause or the effect of progressive malignant disease. In tubercular softening of the lungs, the wan countenance and emaciated frame are the results of a fatal change, which brings on destruction of those organs so pre-eminently essential to animal life; so that such effects are readily understood; but, that pallor should so

* Vide Laennec, t. i. p. 379.

rapidly ensue in those forms of disease in the uterus, mamma, rectum, &c., where no amount of hæmorrhage has previously occurred to deprive the circulation of its red blood, is not so easily explained; nor are the same effects of anæmia, which we notice in the advanced degeneration of the kidney, so easy of solution. It is probable that co-existent with the formation of scirrhus in the mamma, uterus, &c., there may be also some important change in the process of chymification, nutrition, and absorption throughout the alimentary canal.

But, although it is observed that a wan countenance attends the suppuration of pulmonary tubercles, yet there is a great difference between the pallor and the cast of features in this disease, and in that of cancer of the pylorus; and the latter malignant change of structure presents a physiognomical difference from that of uterine cancer or of renal degeneration. Nevertheless the general aspect is the same; but the shades which each disease respectively exhibits are as striking to the eye as the symptoms are peculiar to the seat of the disease.

The shining lustre of the cornea and the prominent globe of the eye, which we so constantly witness in consumption, are not seen in uterine cancer; whilst the rapid emaciation of the face, and the dirty, pale, and faint buff-coloured tint of the whole skin, peculiar to the last-mentioned disease, are not peculiar to incipient renal degeneration; whilst, on the other hand, when the latter disease has advanced to such an extent that the urinary salts are but scantily separated, and the solid contents of the urine are supplanted by a light, pale, and watery secretion containing none of its saline elements, then it is that the puffy cheeks, the œdematous eyelid, the sodden hand, the pinched features, and the expression of general malaria and poison in the system, are manifest.

There is something peculiarly characteristic of malignant disease, as well as of advanced granular degeneration of the kidney, in the appearance of the hand. In the first place, the skin of patients labouring under these diseases is scarcely ever clean; the mental faculties are so blunted, and the energies of the mind and body so enfeebled, that they care not to wash themselves after a night of restlessness and pain, and the early appearance of prurigo is not uncommon in such instances. But the hand is peculiarly grimed with dirt* and is sallow in colour; the nails are long and dirty also; in short, that form of hand and finger-nails, known as the "sot's hand," is usually noticed in the diseases now under consideration.

But an attempt shall be made to give a sketch of the physiognomy of phthisis in its early and most insidious form. This scourge of our race is easily detected when the broad outlines of the disease are portrayed in the emaciated frame, sunken cheeks, glassy eye, and when the trunk of the body, especially the thorax, is bent forwards in the act of walking or in sitting. These advanced symptoms leave no doubt on the mind of the auscultator but that he shall find either bronchophony or pectoriloquy over one or both subclavicular surfaces. It is, however, of far greater importance that he should be enabled to detect this fatal disease when it is undermining the system with slow, yet with steady progress, and at a period, too, when some hope may be entertained that remedial measures are yet available. The physiognomist possesses in this field a superiority of discernment, which the careless observer is at a loss to comprehend. In the first place, let us suppose that we are consulted about the health of a young man, who, it is stated, has been ailing for some months, or only for a few weeks, with loss of strength and enfeebled mental energies. The first glance at the face stamps an impression upon the mind that the patient labours under some attenuating disease. The eye is full, clear, and sparkling; the brows are well arched; the forehead is open and wide; the nose rather pointed; the cheeks have either a brilliant tint over them, abruptly shaded off towards the chin, which, together with the lower half of the face, presents a marked pallor to the rosy blush of the upper part, or else there is seen over and beneath the malar prominences a mixture of pale rose tint with a faint intermixture of waxy coloured skin. The hand is glanced at: it presents a tapering, well-formed set of fingers; no apparent adunquæ nails are yet recognised. One has requested the patient to describe his symptoms and his varied feelings during the short time that the eye rapidly surveys these and various other valued helpmates in diagnostic practice. He converses freely upon his ailments, and he ought to be encouraged so to do, and, when he has carried his mind into the free explanation of his little inconveniences or bodily distresses, he is under less restraint; so that, whilst he is ingenuously telling you the rise, the progress, the variation, and the troubles which have attended his illness, one has time

* I particularly refer now to hospital patients.

to glance again at the animated eye and face. Now we may observe that the *alæ nasi* (those faithful monitors of respiratory derangement) are at work, whilst he converses. The chest is raised from the abdomen, diaphragm, and short ribs, whilst that natural expansion of the upper half of the thorax is only feebly performed. The clavicles scarcely rise at all. He is requested to unbutton his waistcoat, and allow his chest to be exposed. The clavicles are now observed to stand high, whilst the ribs beneath them are sunken; and this is more appreciable over one subclavicular space than over the other. There is also a general attenuation of the parietes and muscular structure on this side, and the same physical signs which have just been mentioned are more striking when the thorax is naked before the eye. Let the *heautophonon* be applied over this sunken portion of the chest, and the operator's voice falls slightly, the patient feels "a ring" through the chest, but not so on the other, or, if he does, it is far less in degree than on the more flattened side.

Let us now take another instance of this treacherous disease. A man, at the age of thirty, but presenting the character of a person ten or fifteen years older, presents himself to our notice. His countenance, at the first glance, gives one the impression that it is similar to an individual who is frost-bitten; all manner of tints seem to be struggling in the physiognomy. There are lilac, blue, rosy, or hectic shades scattered here and there; a doughy, or pasty, and flaccid cheek, not decidedly emaciated, but sunken under the malar bones; a dejected eye, and a weight over it. There is a struggling, when he attempts to converse, as if there was nothing the matter. He looks surprised at you, and with a forced smile wonders, or affects to do so, at the inquiring survey which you take of his whole demeanour; and all this uneasiness is exhibited in a man who declares he has not, or thinks he has not, any ailment.

Now, all these observations, which have occupied me ten minutes to describe, can be made in a less number of seconds by the observing eye and mind. Such instances of early phthisis are frequently unattended with cough, night sweats, or rapid emaciation; probably the only symptom of a marked character which the patient lays any stress upon, is, the weakness of his digestion, and the natural supposition that his slight feebleness of body, &c., is the result of inefficient nutrition, from the dyspepsia which he labours under.

Such an instance is now before my mind's eye: it is that of a young girl of twenty years of age, who has been nursemaid in a family at Dover. She is now under treatment in the hospital. This patient has been labouring under severe dyspeptic symptoms for nine months past, and has been leeches, blistered, &c., over the epigastrium, for an obstinate form of indigestion, but has never had the chest examined by auscultation before she entered our wards.

The following points were observed on her admission:—A sparkling and pleasing eye; a rosy tint over the cheeks, which is uniform and constant; slight hollowness under the malar prominences; some emaciation of body, but especially of the neck, mamma, and pectoral muscles; a capricious appetite, with an almost incessant pain or sinking over the stomach, sometimes aggravated by food, whilst, at others, it is relieved by eating and aggravated by fasting. She ascribes all her ailments, weakness of body, and emaciation, to the little amount of food which she takes, and to the uneasiness which she suffers on account of it. There is no cough, nor any night perspirations, nor has she ever suffered from either. She attributes her sickness to a fright which she experienced nine months ago, whilst bathing with the children in her care, when she allowed the rope of the machine to slip out of her hand, and she was under water, unable to get her feet on the ground; when she came ashore, she had shivering, and was very poorly for several days, but thought that she had got over the effects of the fright, until she observed that her strength and her appetite failed her at the same time.

On glancing the eye over the superior part of the chest, it is manifest that the upper three ribs on the right side scarcely rise, and that there is more flattening here than on the corresponding surface of the left subclavicular region. The use of the *heautophonon* produces a "ring" over this spot which is distinctly felt over the infra-spinous fossa of the scapula. There is but feeble respiration here, though no marked bronchophony can be detected. In short, no practical auscultator can doubt but that the following diagnosis is correct:—"Dyspeptic phthisis* with a series of partially aggregated tubercles dispersed throughout the upper lobe of the right lung." She is improving under the

* The "Strumous Dyspepsia" of Dr. Todd, or the "Tuberculous Cachexia" of Sir James Clarke.

judicious treatment of her physician, who has ordered her the trisnitrate of bismuth with aromatic confection, and an occasional rubefacient liniment, &c., to the epigastrium, with generous diet and wine, &c.

It is a singular feature in the progress of this form of dyspeptic phthisis that the patient can take with relish the most indigestible ragouts, and dishes, pickles, &c. &c., and that too with apparent impunity, whilst on the other hand, if he is requested to partake of a wholesome and nutritious joint of meat, he turns sick at it, and will scarcely touch more than a small portion of the dry and gristly meat of the knuckle of a leg of mutton; but fresh or pickled pork, salmon, veal, &c. &c., are very favourite dishes. This morbid peculiarity in the appetite is very apt to mislead a practitioner also; for he naturally supposes that the disrelish of wholesome food is only symptomatic of enfeebled powers of digestion, and he is, therefore, disposed to encourage the patient's fancies and whims, though he never suspects that the real seat of disease is not in the stomach, and that the attenuation of the body does not spring from any other source than that of deficient nutrition; whereas it is the result of a slow but certain advance which tubercular deposition is making throughout the lungs, so that deficient nutrition and imperfect oxygenation are conjointly undermining the system, and hastening the patient's death.

A lady, with whom I was distantly acquainted, was labouring under such symptoms of dyspepsia as those which I have just mentioned for several months; she would eat of almost any dish, except from a joint, however delicate and tender. When the disorder had been running on uncontrolled for eight or ten months, it was observed by her that she was always set off coughing when the stomach was empty. These additional symptoms increasing, induced me to suggest that one of our physicians should be called in, which was accordingly acceded to, and he, suspecting the case to be one of dyspeptic phthisis, ausculted the chest, and found unequivocal evidences of tubercular solidification, when he very properly ordered the lady to leave London as soon as her family arrangements would enable her so to do; but, alas! she had scarcely strength to move from home, or from street to street, and, after much exertion of body, she contrived to quit the metropolis for the sea-coast, where she rapidly grew worse; hectic symptoms supervened; the cough was harassing day and night; there was then some purulent expectoration, and in less than a fortnight after her departure from London all human hopes of recovery were fled, and she died shortly afterwards. The most distinct pectoriloquy and amphoric breathing were observed under the right clavicle. Now, in this remarkable instance of phthisis, insidiously developing itself under the mask of dyspepsia, there was no cough except at the periods of fasting, and but slight emaciation until a month before her death; and even these symptoms scarcely met with any notice from her relatives at the time that the physician alluded to was called in, who immediately pronounced the case to be one of irrecoverable and advancing consumption.*

The rapid progress of this malady has lately been kept in abeyance by the use of the cod's liver oil; and in some instances this remedy has been the means of exerting a marked improvement in the disease, so much so, indeed, that the profession have almost indiscriminately employed it in every case of consumption. The result has unfortunately been, that it has failed to answer the sanguine expectations of many who have placed so much confidence in the use of this animal oil; and this failure has chiefly been amongst the class of female patients. I have watched the progress of such cases where this remedy has and has not succeeded, and I venture to assert, that the following observations will tend to explain the salutary or inefficient action of the oil in those individuals who are the subjects of tubercular disease.

According to the most recent investigations the lungs throw off daily 8 oz. of carbon †; the skin 6 oz. ‡; the kidneys $\frac{7}{10}$ oz. of nitrogen + $\frac{1}{2}$ oz. of carbon §; and the liver $\frac{7}{10}$ oz. nitrogen + $\frac{1}{2}$ oz. carbon ||; and the alimentary canal and the uterus a further small amount of these elements ¶.

It has been remarked by one author, that when the liver is fatty, "the ordinary constituents of bile pass off as usual. The liver seems not to be at fault, but to be merely performing its allotted task in withdrawing an excess of

* The following form of drops, taken either as an ordinary beverage or as one dose twice or thrice a day, where I have ordered it, has been the means of retarding the rapid progress of hectic in such early stages of phthisis, that I am induced to offer it here:—℞. Ac. sulph. dil., ac. nitr. dil., aa. $\frac{3}{4}$ ss.; trœ. gent. co., trœ. aurant. co., aa. $\frac{3}{4}$ j. ft. guttæ cap. $\frac{3}{4}$ j. ex cyatho decocti avenæ bis terve die; or the same quantity may be put into a quart of barley-water, or a thin decoction of Carrageen moss, and sipped at during the day.

† Valentini, Brunner, Davy, Lavoisier, and Bostock.

§ Prout, Simon.

|| Haller.

‡ Liebig, Carpenter.

¶ Simon.

fatty matter from the blood. Why does the liver become fatty so much more frequently in women affected with phthisis than in men? As yet no satisfactory answers have been given to these questions*.”

“Although the intimate causes of such modifications may be unknown to us,” observes M. Bouisson †, “it is certain that they are the consequence of the nature of the disease which they accompany. In the affections in which the blood is impoverished, as dropsies, chlorosis, phthisis, when the liver becomes fatty under certain debilitant regimens, bile approaches more to the character of serous secretions. In some fevers, on the other hand, all its special characters are exaggerated; its viscosity becomes pitchiness; its bitterness, acidity; its colour and odour, more decided.” This author believes that “we may compare this remarkable condition of the bile to that of the urine in albumimina, and which constitutes a morbid result which may be termed *albuminocholia*. He supports this view by the fact, that in Bright’s disease the bile undergoes the same alteration as the urine; for, having sent to M. Berard a certain quantity of the bile of a patient who had sunk under albumimina, this chemist recognized in it a notable proportion of albumen.”

It appears to my mind, that in those instances where the lungs are studded with tubercles, and where there is but a scanty discharge from them, the amount of carbon they throw off from the system is necessarily very low; and that a copious expectoration of purulent matter would compensate, in some measure, for this deficiency. But, instead of such compensation taking place, the abdominal organs, more especially the liver and the uterus, become the nuclei for the accumulation of carbonaceous and azotized matters. It is a common occurrence to find that female patients with emaciation, slight cough, and with decided physical evidences of phthisis *without* expectoration, are repeatedly subject to severe and profuse catamenial discharges; whilst on the other hand, when this drain from the abdominal portal system is wholly suspended, the cough becomes worse, the expectoration more profuse, and the emaciation more rapid, so that a total suppression of this periodical discharge is usually considered as a very hopeless symptom.

Now, if we regard the uterus, in its monthly evacuations, as subservient to the action of the liver (on which point I apprehend there can be but little doubt), it will follow, as a necessary consequence, that so long as this helpmate to the functions of the liver is capable of relieving it by a free catamenial discharge, so long, in all probability, will there be no tendency to fatty degeneration. This remark, I believe, will tend to explain the frequency of fatty livers, in consumptive females more especially. But in order to place the subject in a more concise manner, let us remember, that “previously to birth the liver is the only decarbonizing organ in the system, the lungs being at that time inert; but, as soon as the latter come into play, they separate from the venous blood a large proportion of the carbon with which it is charged, and less blood is transmitted to the liver.” . . . From the lungs “there is a continual exosmose of carbonic acid and nitrogen, and a continual endosmose of oxygen and hydrogen; the exhalation and absorption of nitrogen appear usually to balance each other, so that the amount of this gas in the respired air undergoes little or no change ‡.”

When this balance, therefore, is lost, a preponderance or a deficiency of these elements in the system necessarily ensues. If the lungs are so far unable to keep up this balance, from solid depositions throughout their structure, without a corresponding relief to such depositions by copious expectoration, or by profuse evacuations from the uterus and bowels, it will devolve upon the liver to separate and to accumulate these azotized elements of the system; and thus this gland becomes surcharged with the principles of fat in a more marked degree, than, when free and copious expectoration exists, and when the catamenia are either profuse or merely regular in quantity; in fact, the azotized and carbonaceous principles are carried off in purulent expectoration, and in menorrhagic discharges.

But, in order to bring these remarks to a practical elucidation of the subject, let us consider, that “if more non-azotized food be taken into the system than can be got rid of by the respiratory process, and if there is not a sufficiently rapid production of adipose tissue to admit of its being deposited as fat, it would accumulate in the blood, unless separated by the liver. If too much work be thrown upon this organ, its function becomes disordered, from

* Dr. Budd on Diseases of the Liver, p. 238.

† On the Bile and its Diseases.—Mémoires de l’Académie Royale de Médecine, t. xiii; and the British and Foreign Review, January, 1849.

‡ Dr. Carpenter’s Physiology. Art. Respiration.

its inability to separate from the blood all that it should draw off; the injurious substances accumulate in the blood, therefore producing various symptoms that are known under the general term of *bilious* *.”

This judicious remark throws much additional light upon the *modus operandi* of that valuable medicine in consumption, already referred to, namely, cod's liver oil. I have observed, that where unequivocal signs of pulmonary softening manifested themselves, and that there was also much emaciation, copious expectoration, with a suppression of the catamenia, this remedy has fattened the patient, soothed the cough, invigorated the muscular powers, and kept the draining perspirations in abeyance; whereas, in those opposite cases where the upper lobes had not broken down, the cough was not harassing, and the expectoration was not copious, whilst the catamenia were regular, or even profuse in quantity and in quality, and where the patient chiefly laboured under an insidious train of dyspeptic symptoms, in such instances my observations have led me to anticipate no permanent or decided benefit from the use of this remedy. It has usually made the sufferer more bilious, or it has deranged the stomach and bowels to such a degree, that many days have elapsed before they have rallied to the same amount of strength as they possessed before its use.

The following brief outline of a case which exemplifies these remarks may be interesting :—

Ellen Williams, aged twenty-four, married, two children, the last two years ago, was admitted May 15th. Countenance expressive of suffering, pasty, and wan, puffiness under the eyes, the lids of which droop, and give a sadness to the features. Peevish and whining in her mode of answering questions. No great emaciation. Upper portion of the thorax scarcely rises in inspiration. A flatness under the left clavicle. Bronchophony, and loud expiratory whiff, and dulness on percussion over this spot; the cardiac sounds are also audible here. No vesicular breathing under the right clavicle. Abdomen hard and painful in the hepatic region; the percussion is dull from the right mamma to the level of the umbilicus; this hardness assumes the shape and course of the liver. Complains of general debility, and of vomiting of all food, especially of solids; and of diarrhœa.

She states that these symptoms have existed for twelve months past, but in an increased degree for the last three months. Prior to this increase in her dyspeptic symptoms, she was troubled with cough, and but with slight expectoration, though, since the aggravation of the sickness, the cough has been better; she spat a slight tinge of bloody mucus a week ago, and the expectoration is now more like thin gum-water, which she says has always been its character. Catamenia throughout regular as to period, but she thinks that, during the last twelve months, they have been less in quantity, although she suffers but little at this period compared to her sufferings before the present complaint began.

The cod's liver oil produced most distressing sickness and diarrhœa in this patient, and it was therefore abandoned †.

Such cases as these, and I could cite others of a similar character, tend to show that this disease chiefly manifests itself in the abdominal, and *not* in the respiratory organs, although the tubercular deposition is silently pursuing its course in the lungs; yet, inasmuch as they no longer balance the usual amount of carbon and nitrogen, so the abdominal organs, in attempting to keep up this balance, become deranged, take on a morbid action, accumulate carbon, &c., and thus engender the disease in question, namely, fatty liver.

I will now proceed to the physiognomical outlines of SCIRRHUS OF THE STOMACH. This viscus is ordinarily attacked with malignant disease at its pyloric extremity only; and when the morbid changes are set up, we may notice the faint, sallow cast of colour in the face and skin of the body, a somewhat pinched set of features, not expressive of any great suffering, with slight emaciation of the whole frame. On interrogating the patient, we usually hear the following statement :—He (though the majority of our cases have occurred amongst females) is more or less distressed with pain at the epigastrium after solid food, which remains for one, two, or four hours, and is then rejected, with immediate relief to his sufferings; but there is this peculiarity about the disease, and which is never met with in ordinary dyspepsia, however obstinate in its nature, that not only is the food rejected without any apparent alteration in its character, from the process of digestion, but there is mixed with it a quantity of thick, brown, sour, and ropy mucus, which is thrown off from the diseased surface of the mucous follicles of the stomach, and which,

* Carpenter's Physiology, *ibid*.

† Two months after the above case was recorded, the patient was still in the hospital, presenting to an auscultator unequivocal evidences of consumption, although there was still but slight cough, and no very rapid emaciation, which would lead us to form this conclusion.

after it has stood a few minutes, presents all the appearances of yeast that has become acescent. He further states, perhaps, that he has vomited some dark blood at one period or another, prior to the occurrence of any pain; and that he has noticed, for some months also, that salt beef, fried fish, pork, and veal, together with green vegetables, cooked or raw, have induced more suffering than boiled or roast mutton, or a mealy potato, which is the only kind of food he can take with impunity. In short, his pathological description of the relative digestibility of various meats and vegetables with him exactly corresponds with the physiological account given to us by Sir Astley Cooper. It is not usual to meet with any external tumour in the epigastric region in this disease of the stomach, and frequently the disease is wholly unattended with pain in the abdomen,—a fact pointed out also by Dr. Baillie in his “*Morbid Anatomy*.”

The internal exhibition of chloric ether, in five or ten minims three times a day, has afforded great relief in many instances of scirrhus pylori; but the following draught prescribed by Dr. Hawkins in a severe case of this disease, now in the female wards of the hospital, has been followed by the most gratifying results:—R. Liq. hydrarg. bichloridi, m. x.; liq. morphiæ hydrochlor., m. ij.; ether chlor., m. v.; mist. camp., ʒjss. ter die. Sometimes the pain has recurred with such aggravation, that an additional opiate, consisting of five grains of comp. soap pill, has been necessarily resorted to at bed-time.

The physiognomy of CARCINOMA UTERI is very similar to that of scirrhus pylori, if we except this, that in the former malignant disease there is more pallor of the countenance, and more distress depicted in the features, than in the latter disease. The subjects of this malady are usually those women who have arrived at the climacteric period of life, and who, mistaking profuse but occasional uterine hæmorrhage for that “*dodging*” of the catamenia which so commonly occurs at this time, neglect themselves, or do not consider the subject of sufficient importance to apply for medical aid or advice until the disease has so far advanced, that the early stages of induration and of vascularity have given place to those of irreparable ulceration and hæmorrhage. This is especially the case with our hospital patients: we constantly meet with instances of females seeking admission into our cancer ward, who not only labour under advanced ulcerating cancer uteri, but who have, nevertheless, received little or no medical assistance prior to their application at the hospital*. But this remark does not apply merely to the lower class of females, for the same error in judgment, or delicacy of feeling in making their ailments known to a practitioner, exists amongst the better classes of society. The mother of a medical gentleman, whom I know, was suffering from occasional uterine hæmorrhage during many weeks, before she would consent to obtain professional advice; my friend was hastily summoned to visit his mother, who, it was stated, was alarmingly ill. He accordingly went down into Devonshire, but the disease had made such progress, and the destruction of the neck of the uterus was so extensive, that little hopes could be entertained of any recovery. The fatal result took place in six weeks from the period that he was first informed of her illness, and only a few months from the onset of the hæmorrhage. It has always appeared to me, that whenever we are consulted by a married woman, who has borne but few children, and those have appeared at irregular intervals, so that three, five, or seven years have elapsed between the birth of each, and there have been also one or more miscarriages; that when the climacteric period of life arrives, and the catamenia are profuse and attended with unusual pain, and when, moreover, the countenance assumes a wan appearance, and that the digestive functions are much disturbed, we may be certain that malignant induration of the cervix uteri is progressing, for which, if timely aid is afforded by judicious medical treatment, the patient may receive, probably, many months’ relief, and be spared many more of acute suffering and distress. Dr. C. West, the physician-accoucheur to this hospital, has collected a valuable body of information, from British and continental writers, on the treatment, pathology, &c. of these diseases, and to which I must refer the obstetric student†.

* There are two cancer establishments in this hospital, a peculiarity of the institution not met with elsewhere in the metropolis, and I doubt if it is to be found in any charity besides in the British isles. That for females (as it stood in 1847) consists of a noble and an airy ward, containing ten beds, a head nurse’s sitting-room and a bed-room, and a kitchen, with every convenience for the comfort of these poor afflicted women. It was founded by the late Samuel Whitbread, Esq., and is maintained by a separate fund for that purpose. The male establishment consists of three beds, and was founded by Mrs. Althea Stafford. The patients are allowed to remain in the hospital till death terminates their sufferings, unless they wish to be discharged, or are cured by remedial measures. There is, in addition to the above establishments, a uterine ward, for nine patients, affected with diseases incidental to childbirth, &c.

† “*Reports on the Progress of Practical Medicine in the Departments of Midwifery and the Diseases of Women and Children in the Years 1842—1846.*”

CLASS III.

Division II. *Emaciation of Frame; Countenance of peculiar hues.*

From Dropsy.	From Mesenteric disease.
„ Renal disease.	„ Entozoa.
„ Hæmorrhage, ushering in the above.	

I trust it will not be deemed superfluous if I now advert, in the course of some prefatory remarks upon renal disease, to those discoveries and minute dissections of the intimate structure of the kidney in mammalia, which I made public ten years ago, under the title of “A Popular Treatise on the Kidney, &c.” I have had no reason whatever to alter the leading points which I then put forth to the profession, but, on the contrary, my mind has been more confirmed, by daily observation in health and in sickness, in the wards and in the pathological room, of the truth of those assertions, and of the important facts which are connected with them. For the sake of brevity, and for the information of those readers who are not acquainted with these facts, I will just recapitulate some of the main points of the subject then published to the world.

In the first place, it was stated that animal oil or fat passes into the mouth of the kidney through the reflected portions of its investing membrane, and, by that channel, into the seven divisions of the pelvis of the ureter, and onwards to the semicircular branches of these divisions, until it arrives at a series of delicate and minute tubes called “feathery oil-tubes.”

2. That these oil-tubes coalesce with, and drain their contents into, the urinary ducts.

3. That the radicles of these oil-tubes are so perfectly indestructible in their nature, that, when the most complete decomposition and disorganization of the whole kidney has been obtained by long-continued maceration, yet these oil-tubes remain unchanged in their nature, like the fat which they contain.

4. That these oil-tubes drain off a large portion of water from the oil which surrounds the kidney, and carry it into the urinary ducts for excretion.

5. That these oil-tubes were the “veins” alluded to by Carpi and Mathæus de Gradi; “the second class of ducts, or glandular ducts,” of Bertin; the “mèches” of Winslow; the “vaisseaux spongieux” of Vieussens; the “ducts from veins” of Eysenhardt; the “white cortical ducts” of Ferrein; and the “serpentine ducts” of Müller, Ruysch, Meckel, Rathke, Skumlskey, Huschke, &c., and the “lymphatic vessels” of Nuck, &c.

6. That these authors had no idea that the office of the kidney is twofold; for, whilst, on the one hand, it separates saline excrementitious matters from venous blood, it removes the watery portions, with the elements of urea, from the fat of the body, thus exhibiting a close analogy to the functions of the liver; for, as the hepatic artery is primarily a nutritive vessel, and, secondarily, aids in the formation of bile, and the portal vein is charged with highly oleaginous and non-coagulable blood for the secretion of bile, so, also, the renal artery is a nutrient vessel, whilst the venous plexuses adjacent, and oil-tubes combined, separate the constituent principles of healthy urine. So that I have observed, that wherever we find no portal blood going into the kidney, &c., we may trace the fat passing into this gland through its proper membranous sheath; oil-tubes pass off from these membranous sheaths or calyces, and these tubes anastomose freely with the vascular network of veins which surround the whole course of the uriniferous ducts. In some reptiles, birds, and fishes, a portion of venous or portal blood, from the intestinal canal, the extremities, and the tail, not only goes to the grape-like fat-cells of the liver, for the secretion of bile, but a portion of this venous or rudimentary portal system also goes to the kidney for the secretion of urine.

The valuable researches of the continental physiologists into the minute structure of the glandular system have been greatly enhanced by the appearance of Mr. Solly’s excellent translation of Müller’s work “On the Intimate

Structure of the Secreting Glands, with the subsequent Discoveries of other Authors*.” In these pages, whilst treating on the structure of the kidneys, Mr. Solly has done me the honour to quote at some length the anatomical views of this organ which I published to the world in 1839. I may, therefore, transcribe this gentleman’s remarks on my work from his own pages. He observes thus:—

“A work has lately appeared on the kidney, by Mr. George Corfe, the resident medical officer of the Middlesex Hospital, entitled ‘A Popular Treatise on the Kidney, its hitherto Unknown Functions, and its Diseases in Connection with the Circulating Animal Oils, &c.; with Advice to Persons on their Secretions.’ In this work Mr. Corfe describes a structure in the kidney distinct from blood-vessels and urinary ducts, under the title of the ‘oil-tubes.’ These tubes communicate with the fat, or ‘suet,’ which surrounds the kidney, and act as channels, through which this fat as oil flows into the kidney. The agent made use of to propel this oil or produce this current through the kidney is not described, but left in a state of uncertainty †.

“The tubes at their termination in the urinary ducts present a feathery appearance, and are denominated the feathery oil-tubes. We have seen Mr. Corfe’s preparations ‡, but do not feel quite convinced of the existence of the tubes, but are rather inclined to believe that the tissue, which he considers tubular, is no more than the cellular web which is found binding together the tubes of all glands §; and he states himself (p. 71) that they cannot be injected from the urinary ducts, nor from the veins or arteries, for they have no connexion with the blood-vessels. This difficulty of injecting them he accounts for by the assertion that they ‘pass into the urinary ducts in a valvular mode ||.’

“But, whether Mr. Corfe is correct in his anatomy or not, his preparations are highly deserving of examination ¶, and his work is well worthy of perusal; we shall do him no more than justice if we make a few extracts, and so far let him tell his own story in his own words.

“The kidneys are surrounded by a loose cellular covering, known as the adipose membrane, because in robust and healthy persons its cells are filled with oil**; they have a proper coat or membrane which envelopes them as a skin. This membrane I shall term at present ‘the reflected membrane’ of the kidney.’ (P. 60.)

“This membrane is not cellular, like the adipose membrane: it passes into the bosom of the gland, being reflected within itself, as I shall presently describe. It consists of two delicate layers, the outer one being more dense and fibrous than the inner one ††; between these two layers is a delicate network of cellular tissue; air blown between these two layers distends the cells of the tissue, and exhibits the two coats of this membrane. At the mouth of the kidney, the membrane is reflected inwardly, lying upon or on the outside of the suet, the pelvis, and

* London: Jas. Butler, St. Thomas-street, Southwark, 1840.

† Not exactly so; for the same laws which enable portal blood to traverse the pelvis and abdomen up to the liver will also enable the oil to pass into the mouth of the kidney, from one cell of the adipose membrane to another, until its watery excretion arrives at its destination, viz., the urinary ducts. There is, moreover, a distinct motion imparted to the liver, spleen, and kidneys by every act of respiration, which doubtless aids in the excretion of bile, urine, &c.

‡ Of the cod-fish, rabbit, sheep, ox, lion, and the human subject.

§ If such were the facts, then the third axiom, already stated, would be incorrect; whereas the proof of these tubes not being a cellular web is, that they are most perfectly seen and demonstrated, when decomposition has destroyed all trace of cellular threads throughout the gland.

|| Precisely so; and containing, as they do, a matter that is most resisting to all injections—namely, oil—they can never be injected until some chemical agent can be found which will wend its way through cold fat, and thus run into these tubes. But the eye recognises the fat in these tubes most readily when they are seen under a glass of ordinary magnifying powers.

¶ These preparations are to be seen in the Middlesex Hospital Museum, and some few were also sent to the public museums of all the metropolitan schools of medicine.

** The cells that are farthest from the kidney are the largest, and the most dense of the whole mass of suet. As the oil drops from cell to cell, it passes through partitions thinner and thinner, or sieves finer and finer, until the network is so delicate, around and within the gland, that it requires a magnifying power to demonstrate it. The oil corresponds likewise in its consistence to the circumference of the cells which contain it. If a small portion of oil is taken out of the adipose membrane most remote from the kidney, and smeared over the hand, it runs lumpy and hard over the warm skin. If a portion be removed from the minute cells, just as it is entering into the bosom of the kidney, and similarly treated, it runs over the hand like tallow taken from under the flame of a candle. If the grosser lumps be taken again, and held over a spirit-lamp, it spirltes and burns with a crackling noise, as though it contained water and salt; but, on the contrary, a portion from the bosom of the kidney burns silently, rapidly, and is truly pure oil.

†† Hence it is called by anatomists the fibrous coat of the kidney.

blood-vessels, so that these latter pass into the gland between the reflections of this membrane, just as the finger passes into a glove." (P. 64.)

"The reflected membrane having surrounded the kidney passes to its mouth, and lies on each side of the pelvis, to which it now becomes intimately united. So intimate is this union, that, in describing the course of this membrane, I am in fact also describing the course of the pelvis with its seven branches, for the membrane forms sheaths to them all, and passes inwards and upwards to the very surface of the gland, and surrounds all the large vessels as soon as they emerge from the seven branches of the pelvis; it thus forms a space through which the ureter, veins, and arteries, &c. pass. The further course of this membrane through the kidney may be represented by the hand and fingers when covered with a glove: the hand is figurative of the mass of vessels, ducts, and nerves; the palm, of the pelvis; the fingers, of the several branches of the pelvis; and the whole glove, the course of the membrane over them. If the thumb of the glove be turned outside in, it will represent the ureter passing out from the pelvis, whilst the palm of the half-closed hand, with its glove on, will be figurative of the interior of the pelvis. If, therefore, a lady's glove be put on the hand, and the portion usually covering the arm be drawn inside out over the hand and fingers, it will just represent the whole course of this reflected membrane. The flesh of the kidney may be represented as between the inverted portion of the glove and the fingers and hand; it resembles, therefore, a double-headed nightcap, having the flesh of the gland, as it were, between the two heads of the nightcap." (P. 65.)

"The following is Mr. Corfe's description 'of the ureter and pelvis, and of the course of oil within its various branches;' and, consistently with justice to Mr. Corfe, we can scarcely curtail it:--

"In order to give the reader a true conception of the course of the ureter, and of its relative position with the other parts of the kidney, I shall again use the simile of the hand covered by a glove, with the thumb turned outside inwards, and the glove having seven fingers instead of four; this will represent the seven branches of the pelvis.

"The ureter, having waded through the mass of fat which is going to the kidney, passes into the free and open space of the pelvis at a spot that is opposite to one-third of the distance of the whole breadth of the gland. This spot may be represented by the open mouth of the thumb of the glove when the thumb is turned outside in. The body of the glove covering the palm is, therefore, the whole pelvis, which incloses the oil, arteries, and veins, &c., just as the glove incloses the palm of the hand. The breadth of the pelvis is rather more than half the breadth of the whole kidney. There are usually seven divisions, or branches, coming off from this portion, termed the pelvis; and these portions have received the name of calyces, and they may be represented as the seven fingers of the glove, inclosing oil, veins and arteries, nerves and lymphatics, &c. But I shall term them the "seven semicircular oil-tubes" of the kidney. From these seven principal oil-tubes come off smaller ones, but still are they also "semicircular oil-tubes." These smaller ones may perhaps vary from eighty to one hundred in number. They pass in semicircular forms from the seven principal oil-tubes, and in the human subject and in the ox form the most complete net, so that in the living body they must be arranged like so many minute cabbage-nets. Through the interstices of this net pass the several prolongations of the medullary substance before terminating in papillæ.

"From the whole series of these large and small 'semicircular oil-tubes' come off an innumerable set of tubes, shaped with 'barbs and barbules,' like a feather. I shall, therefore, term these 'the flocculent feathery oil-tubes' of the kidney. They may be described as coming off from the ends of the seven fingers of the glove, and as hanging about like so much down or shaggy substance, when properly prepared for demonstration.

"They are dispersed throughout the whole medullary and vascular substance of the gland, and compose at least three-fifths of the whole bulk of the organ. They may be traced to within one quarter of an inch of the surface of the kidney, where they are lost in minute terminations. The reflected membrane cannot be traced with the naked eye beyond the 'semicircular oil-tubes,' though, from microscopic observations, I have no doubt but that it is continued as a delicate covering to these minute 'feathery oil-tubes' throughout their whole course, and passes with these tubes into the urinary ducts, thus forming a continuity of surface between the external parts of the tubes and the internal surface of the urinary ducts, as will be seen presently.

"From that portion of the pelvis which corresponds in a glove to its several seams or edges, come off, besides the above-described 'feathery oil-tubes,' an innumerable set of the same kind of tubes, but which, for distinction's

sake, I shall term 'the lateral feathery oil-tubes.' They are not so numerous as the first-mentioned tubes, but their office is the same. The whole series of feathery oil-tubes might be justly represented by sticking in the ends of the fingers of the glove a large bunch of white and small downy feathers; and, by putting some also along the various seams of the glove; it would give a pretty fair representation of the 'lateral feathery oil-tubes.' (P. 68.)

"With regard to the shape of these flocculent feathery oil-tubes, they are similar to a very fine feather, with its barbs and barbules. The barb of these feathery oil-tubes lies upon a urinary duct, or between two of these ducts, as they descend from the surface of the gland. They thus become intimately bound up with the little bundles of urinary ducts. The barbules of these feathery tubes penetrate the sides of the urinary ducts, and empty the excrementitious drain from the oil into these ducts. They cannot be injected from the urinary ducts, nor from the veins and arteries, for they have no connection with the blood-vessels*.

"The barbules are very minute, and pass into the urinary ducts in a valvular mode, such as the ureter forms in its entrance into the inner coat of the bladder, so that injection will not go into them from the urinary ducts. These tubes, throughout their whole course, are surrounded by a most delicate, shaggy, or downy membrane, which is reticulated, and has the appearance of minute hoar-frost; but under the microscope it resembles fine lamb's wool, or white moss†.

"The majority of these feathery oil-tubes pass into the urinary ducts in the vascular substance of the gland; but those which I designate the lateral feathery oil-tubes join the urinary ducts in the medullary substance. I believe that these lateral oil-tubes, from their relative position, pour out an oleaginous fluid, less watery in its character than that which is drained away from the other feathery oil-tubes in the vascular substance. The use of this oleaginous fluid, I apprehend, is simply to lubricate the internal surface of the pelvis, in the same manner that the ureter is lubricated by that oil, outside of the pelvis and kidney, which passes into the orifices of this duct.' (P. 91.)

"Mr. Corfe considers that the only urinary ducts of the kidney are the straight tubes of Bellini, and that the convoluted tubes of the cortical substance are oil-tubes; that the commencement of the urinary ducts is a blunted point within the venous circles at the surface of the gland.

"Each venous circle,' says Mr. Corfe, 'incloses one of these points. These points, then, are the blunt ends, or, more properly, origins of the urinary ducts.' (P. 74.)

"The origins, therefore, of the urinary ducts take place within these venous circles, and they are joined to the veins by minute twigs from these vessels, the whole being connected together by the reticulated membrane. These venous circles, and their innumerable twigs, are the vessels injected, which give the peculiar dark zone to the kidney when sliced open. These blunted origins of the urinary ducts on the surface of the gland receive a delicate prolongation of the internal layer of the reflected membrane of the kidney, which dips down within each venous circle to pass into the duct, and there communicates and is continuous with the internal lining of the ducts, pelvis, and ureter. Thus the internal layer of the reflected membrane, and the internal lining of the urinary ducts, are continuous. This continuity of surface takes place at the blunt origins of these ducts, on the external portion of the gland. So, also, the external layer of the reflected membrane, and the internal lining of the ureter, pelvis, semicircular oil-tubes, and feathery oil-tubes are continuous. This continuity of surface takes place at the margins of the semicircular oil-tubes, and along the feathery oil-tubes within the gland.

"The numerous urinary ducts, having passed out from the venous circles, run down like the rays from the circumference of a circle to its centre, converging towards the semicircular oil-tubes, their spongy friable character disappears, and they become dense, fibrous, and hard. This change of character in the urinary ducts arises from two circumstances: they become more and more compact, and girt together within as small a space as possible, to allow them to pass through their respective semicircular oil-tubes; they are also bound firmly round by the dense band of substance which composes every semicircular oil-tube.

* It is important that this fact should be borne in mind, since it explains the reason why these tubes are not injectible from the blood-vessels; and we know that it requires the force of an injection thrown into the urinary ducts, in vacuo, in order to fill them even as far as the secreting portion of the gland. We need not be surprised, therefore, at the difficulty of injecting these oil-tubes, which fall into the urinary ducts.

† Basement membrane of Müller, &c.

“But, besides this peculiarity in the structure of the urinary ducts in this portion of the gland, they are now joined by the innumerable barbs and barbules of the feathery oil-tubes. The spot where this junction commences may be stated to be midway between the semicircular oil-tubes and the surface of the kidney. As the urinary ducts proceed downwards, they are again and again joined by numerous other oil-tubes, until the mass arrives within a minute distance of the semicircular oil-tubes, when a very scanty supply is sent off to the ducts, and the whole collection or assemblage passes between its respective semicircular oil-tubes*, and assumes that appearance known as the medullary or tubular structure of the gland. The urinary ducts, in their course downwards, run into one another, so that twelve or fifteen ducts are folded up into two or three, at the medullary substance. But that bifurcation, which some authors have spoken of in the urinary ducts, is an erroneous supposition; the mistake has originated with them in looking upon the innumerable feathery oil-tubes which join the urinary ducts as so many urinary ducts also. These ducts are of the same diameter and of the same admeasurement throughout; they could not, therefore, bifurcate without suffering a diminution in diameter. It is not, therefore, a bifurcation of the urinary duct, but the adjunction or falling in of an oil-tube with a duct, which renders it forked†.” (P. 75.)

“Speaking of the capsule renales, he says, ‘It is very probable, also, that the renal glands receive only the ‘stearine,’ or spermaceti-like principle of animal fat; for in the lower animals, whose fat is wholly made up of the ‘elaine,’ or oily principle, these glands are absent. Thus the first principle in animal oil would be purified and sent into the blood through the renal gland and its vein; whilst the second or oily principle in the animal fat would be purified and sent into the blood by the kidney and its renal vein.’” (P. 83.)

“We must conclude our reference to Mr. Corfe’s work with a few extracts from his observations ‘On the Physiology of the Kidney as contrasted with the Liver.’

“‘That the urine is separated by the kidney, no one will deny; but that this excrementitious drain is separated from the ‘life-giving blood’ which the renal artery conveys to its bosom is an assertion so palpably erroneous, anatomically, so contrary to reason, and so opposed to the facts of daily occurrence among the sick, that I hope I shall have convinced my readers, and the profession at large, before I conclude, of the fallacious and untenable ground upon which such assertions have been made. The bile is a secretion from venous blood highly loaded with oil, ‘after its kind,’ and termed portal blood. The urine is a secretion from oil and venous blood, which fluids conjointly form urine.

“‘The liver, as I conceive, forms the pattern of all the glands; having no fat in or around it, as is the case with other glands, the portal vein necessarily performs the office of conveying both oil and venous blood to the liver. Thus the vein couples these two fluids in its bosom, which in other glands, as in the kidney, exist in separate tubes and veins.’” (P. 84.)

“‘I have repeatedly examined the layers of the omentum or caul, and its so-called veins, but which are in reality tubes conveying oil slightly tinged with blood. I have invariably found them in this membrane, as described by Malpighi, Morgagni, and others. The globules of oil line their whole course, and pass into these tubes throughout their whole extent.

“‘But the four layers of the caul which lie between the great arch of the stomach and large intestines send oil, by innumerable oil-ducts, into these portions of the alimentary canal. The caul performs a similar office with the liver that the oil around the kidney does with this gland. In hyemal animals both of these reservoirs for fat become enormously distended with oil, which is exhausted when they awake out of their lethargic state of sleep.’” (Pp. 85, 86.)

* Throughout this description of the kidney the term *tubes* designates the oil-tubes of the kidney; but the expression *ducts* refers only to the uriniferous ducts of this gland.

† In order to demonstrate this beautiful structure of the whole series of oil-tubes, it is only necessary to take a healthy kidney (that of the sheep is most to be preferred), and to strip it of its proper membrane, and then to macerate the organ for ten or fifteen days; when the hand must gently squeeze, or knead off the decomposed fleshy structure of the medullary and vascular portions of the gland; having accomplished this process, the remaining part must be washed several times in clean water, when the delicate and innumerable series of oil-tubes will at once become insulated and visible, and they may be then traced throughout their course.

I must here remark that, since the publication of Mr. Solly's kind notice of my work, I have been enabled to carry the subject somewhat farther, and I have satisfied myself on the following facts with regard to the minute anatomy of the kidney, in brutes and in the lower animals. The substance, however, of these facts was original, and was discussed somewhat at large throughout the work already referred to, and it may now be condensed in the following paragraphs, comprising the root of the whole matter, viz., the circulation of oil within the kidney, and its excretion, forming one portion of the fluid known as urine; and its corresponding portion of secretion from venous blood*.

In the first place, then, it may be observed, that the simplest model for renal secretion exists in the lowest tribe of animated creation, whilst the most complex form is to be found in the highest of God's creatures, namely, man.

Yet this simple form of kidney in a worm or in an insect is continued, in all its essential characters, throughout the gradative stages of this lowest class up to man.

If the two main excretory glands, the liver and the kidney, be compared, we may trace a very marked affinity in the functions, anatomy, and gradations of these two organs throughout animal life.

For example, we find that a similarity of *function* in these two glands exists, in that they both separate hydrogen, carbon, and nitrogen, from the animal economy.

We notice a similarity in the *anatomy* of these two glands. For in the several tribes of vermes, coleoptera, arachnidæ, crustacea, and mollusca, the origins of the biliary ducts take place on the berry-shaped fatty bodies of the abdomen, and terminate on the upper part of the intestinal canal; whilst, in the same tribes, the origins of the uriniferous ducts take place in the sacs of fat lying nearer the cloaca, and they empty their contents into this pouch, *propè anum*.

Again: passing on to the next gradation in created beings, we see that in fish, reptiles, birds, frogs, toads, and in all the amphibia, a portion of venous blood from the extremities not only goes to the grape-like cells of the liver for the secretion of bile; but a portion of this venous, or rudimentary portal system, also goes to the kidney for the secretion of urine.

Here I may remark, that where there is no true portal system wholly employed for the secretion of bile, as is the case in the brute creation, neither is there a true series of hepatic lobules, as in mammalia.

So, also, where there is not a true ureter, pelvis, calyces, with their several branches surrounded by a vaginal sheath, or reflected membrane, containing and conducting fat into the bosom of the kidney, neither is there a true series of malpighian bodies, nor reticulated meshes of tubes and veins for the secretion of urine.

But, when we arrive at the comparative anatomy of the liver in brutes, we find a true portal system, derived from capillaries which take their origin in the mucous follicles of the intestine, the omentum, mesentery, &c., conveying blood, highly charged with the principles of fat, directly to the liver; and in which gland the portal blood is exhausted throughout the hepatic lobules, in the secretion of bile.

The kidney, however, in these tribes contains within its own bosom two sets of capillaries, which are wholly employed in the secretion of urine; these capillaries form the reticulated and highly vascular membrane, from which the urine is secreted; and this net-work is composed of, or made up by, the innumerable capillary branches of oil-tubes and radicles of veins. The following comparative table will exhibit the reciprocity of function and of structure in these two important excretory glands of the abdomen.

COMPARATIVE ANALYSIS OF THE STRUCTURE AND OF THE FUNCTIONS OF THE LIVER AND KIDNEY, IN GRADATION, UP TO THE HUMAN SUBJECT.

<i>Liver.</i>	<i>Kidney.</i>
In worms, insects, arachnida, crustacea, mollusca, beetles, &c. &c.,—	In the same tribes,—
Ducts come off from little sacs of thoracic and abdominal fat, pass across the abdomen, and empty themselves	Tubes come off from little sacs of abdominal fat nearer the cloaca, pass down the abdomen, and empty their

* The latter idea of venous secretion in the kidney has been since adopted and worked out by Mr. Bowman in his paper read before the Royal Society.

Liver.

into the stomach, or upper portion of the alimentary canal. The secretion is analogous to bile.

In fish, birds, reptiles, and amphibia,—

Ducts come off from oily vesicles, and pass across the abdomen, and empty themselves into the stomach; whilst, also, a series of abdominal and pelvic veins, known as the portal system, pass into these sacs, and from them, conjointly, bile is eliminated. There is an omentum, and other rudimentary sources, for portal blood.

In mammalia,—

Hepatic ducts come off from hepatic lobules, surrounded by Glysson's capsule. The hepatic ducts are filled with bile, derived from a true portal system; which portal blood is formed from a series of capillaries arising in the fat of the omentum, mesentery, intestinal canal, and from the mucous follicles of the intestines themselves.

In mammalia,—

The reflection on the under surface of the liver forming Glysson's capsule conducts and contains, throughout the lobules of the liver, the oleaginous portal blood, as well as the blood-vessels and the hepatic ducts.

"Glysson's capsule is not mere cellular tissue: it is to the liver what the pia mater is to the brain—it is a cellulo-vascular membrane, in which the vessels divide to an extreme degree of minuteness; which lines the portal canal, forming sheaths for the large vessels contained in them, and a web in which the smaller vessels ramify; which enters the interlobular fissures, and, with the vessels, forms the capsules of the lobules; and which finally enters the lobules, and, with the blood-vessels, expands itself over the secreting biliary ducts †."

In those tribes that possess no true portal system, in these there is no omentum or abdominal fat beyond the little sacs already spoken of, which give off biliferous and uriniferous ducts.

Kidney.

contents into the intestine, *propè anum*. These tubes contain uric acid*.

In the same tribes,—

Tubes come off from the sacs of abdominal fat, and pass down the abdomen, and terminate in a cloaca. These tubes contain uric acid, whilst some branches of the portal vein (caudal and ischiadic) are distributed to these oily sacs, and thus assist in the formation of urine†.

In mammalia,—

Uriniferous ducts come off from a tubular and venous network, which network is made up of an innumerable mesh of oil-tubes and a series of venous capillaries. The oil or fat is inclosed in its own sheath, as portal blood is inclosed in Glisson's capsule.

In mammalia,—

The reflection of the fibrous coat of the kidney at the mouth of this gland conducts and contains the fat throughout the organ, from which a drain is sent forth into the uriniferous ducts by means of oil-tubes.

The reflected membrane of the kidney is not cellular tissue; it is to the kidney what the capsule of Glysson is to the liver: like this, also, it is a cellulo-vascular membrane; "it forms sheaths to the pelvis, with its seven branches, the calyces and their branches, and passes inwards and upwards to the very surface of the gland, and surrounds all the large vessels as soon as they emerge from the several branches of the calyces." "It enters within all parts of the cortical substance, but is not found in the medullary portion of the gland §."

It also expands itself as a basis for the reticulated venous capillaries.

In those tribes that possess no solid form of kidney, no branching ureter, pelvis, or calyces, &c., in these the fat does not circulate within the gland; but the lower or anal set of ducts are uriniferous, and come off from sacs of abdominal fat.

* Meckel's Archives für Physiologie, t. viii. p. 218. Müller, De penitiori Structura Glandularum Secernentium. Leipsic, 1836.

† Sur l'Existence des Reins dans les Mollusques; Jacobson et De Blainville. Journal de Physique, t. xci. p. 318.

‡ Kiernan, Phil. Trans. 1833.

§ Popular Treatise on the Kidney, by Corfe, p. 65.

Liver.

But, in those tribes that possess a true portal system, the intestinal portion of that system is composed of innumerable capillaries, which have their origin in the fatty appendages of the abdomen and intestinal canal.

The radicles of the portal system are twofold: they are extrinsic to the liver or abdominal; and they are intrinsic or hepatic; its trunk being lodged in the capsule of Glysson beneath the gland.

The sheath of the hepatic lobules is a continuation of the capsule of Glysson.

"The capsule of Glysson enters the hepatic lobules, and, with the blood-vessels, expands itself over the secreting biliary ducts *."

Having thus made a few remarks upon what I believe to be the true anatomy, physiology, and peculiar structure of the kidney of brutes, with an especial reference to that organ in man, I may now proceed to observe that, although **DROPSY**, as a disease, is thus placed in the division of this class, yet dropsy, as it proceeds from various other causes, will be adverted to when the general subject of enlargement of organs and of glands is entered upon. But the form of dropsy which results from albuminous disease of the kidney produces such a marked and an early change in the colour, expression, and general appearance of the features, that it is now taken up on account of the peculiar hue which attends the countenance of those patients who suffer from it. Moreover, the disease, dropsy, is by no means a symptom essential to albuminuria; but each form comprised in that classification, whether it is cardiac, or hepatic, or splenic, usually involves other organs in the general disturbance. But this is not the case with renal or Bright's disease. This malady often runs its course to a fatal termination without involving other vital organs, or even without producing dropsy. The gradual stages of hæmaturia; suppression; coma; and death, from effusion into the ventricles of the brain, often take place within a few days, and before any disease has been set up in other parts of the body.

But let me draw a picture of one of the most difficult instances for diagnosis which we may meet with.

A man, about the age of forty, presents himself for advice; his frame is somewhat emaciated, his countenance is pallid, and his features are pinched and shrunken. You observe that he bends the trunk forwards, and that, as he addresses himself to you, the respiratory organs are laboured, the *alæ nasi* are at work, the breathing is hurried, the lips are of a faint, leaden hue, and the angles of the mouth are slightly drawn downwards. He shows you his ankles; they are somewhat puffy, but there is no œdema elsewhere. His abdomen is full, tense, and somewhat painful about the epigastric region, but there is no evidence of peritoneal effusion. He states that he has suffered greatly from dyspeptic symptoms, and nauseous taste in the mouth; that his sleep is disturbed, and that he requires a higher posture in bed than formerly; that his urine is plentiful and tolerably clear; and, moreover, that these symptoms have been gradually pressing on him for several months; but, being harassed with anxiety about his family, his work, and his difficulties in business, &c., he had not attended sufficiently to his ailments to induce him to seek any medical advice, or allow himself to be put under any prescribed form of treatment. What is the diagnosis which one would form from such an outline? Probably, the first impression of the mind would be that it

Kidney.

But in those tribes that possess a solid form of kidney, with a branching ureter, pelvis, calyces, &c., the fat passes into the body of this gland, and its drain or secretion falls into the urinary ducts through an innumerable series of capillary oil-tubes.

The radicles of the oil-tubes are twofold: they are extrinsic to the kidney in the adipose membrane; they are intrinsic, as regards their terminations in the uriniferous ducts of the gland.

The covering of the malpighian bodies is a continuation of the reflected sheath of the kidney.

This vaginal capsule is not only spread over the malpighian bodies, but it continues to form a basis for the tubular and venous network; in which network is the seat of the conjoint urinary secretion.

* Kiernan, Phil. Trans. 1833.

was cardiac disease only; and I believe that a vast number of such cases occur in which the practitioner never sees farther into the man's disease than this; and he judges it is cardiac, merely because the symptoms of organic derangement of that viscus are the most marked and the most prominent. But if he is a scrutinizing man, and an attentive clinical student, still, although with hoary hairs scattered over his head, he will, I say, go somewhat further in his investigations after the real seat and origin of the disease than this. What does he then elicit? Some of the following pathological features may be drawn out. The early stages of the disease, under which our patient now suffers, were ushered in, he acknowledges, with dull aching pain across the loins; that the urine was then turbid, and perhaps rather scanty; that he is now disturbed three or four times during the night, to pass it. We obtain a little of this urine; we find its specific gravity only 1008; it is clear, limpid, and with little colour, faintly acid, containing no albumen. In reply to further interrogations, he confesses that he is occasionally distressed with tightness across the forehead, or a settled dead pain over one brow and temple, which incapacitates him for any mental exercise; that his bowels are capricious as well as his appetite; that all fluids distress him, by inducing flatulence and acid eructations; that he never perspires as he formerly did; that the shortness of breath is of more recent date, but that it is unconnected with any history of previous rheumatic disease of the heart. When the hand and the ear are both placed over this organ, we find that its impulse is feeble and diffused, whilst its sounds are dull and prolonged; there may be some preternatural whiz with the systole also.

What may we now infer from these hints which we meet with in our researches after truth? We can confidently affirm, that the first cause of dropsy, in this instance, was an albuminous disease of the kidneys. Their secreting structure has thereby become altered in character. They have long ceased to eliminate those solid constituents which enter into the composition of healthy urine. Those constituents have remained in their elementary form in the body, and their presence has vitiated the fluids, especially the blood; the cardiac valves and the nervous system, but especially the brain, are distressed thereby; and the muscular walls of the heart have suffered also from its contact with this poisoned stream; thickening of these parts, and dilatation of the cavities, have ensued, whilst the obstacles thereby presented to the free exit of the blood from the right chambers of this viscus through the lungs have, on the one hand, given rise to dyspnoea, and, on the other hand, to a delay in the ascent of the hepatic venous blood into the right auricle*. The lobular hepatic veins will necessarily become congested, and by their distension they will impede the circulation of portal blood, and consequently prevent the due secretion of bile from it. The mucous coat of the stomach and small intestines is now the seat of subacute inflammation; softening of this membrane, together with a depraved secretion, of an acidulous tendency from its surface, ensues.

Now it must be manifest, that if the disease in question was renal at its onset, and that one has unequivocal evidence that such a disease has advanced so far as to deprive the kidneys of their healthy discerning powers, we cannot reasonably anticipate any decided benefit from the administration of saline or stimulating diuretics; whereas, if the complaint had proved to be one wholly cardiac, in which the kidneys had not yet participated, then the exhibition of such diuretic remedies might have been, not only judicious, but, as is often the case, of the utmost service to the patient, by the help which they afford in unloading the system and relieving the heart of its oppression. Again, it may be observed, that nothing can evidence the importance of a just diagnosis, in the case now alluded to, more than the assistance it affords to the use or the abuse of that valuable remedy in dropsy, elaterium. The exhibition of this drug in dropsy supervening upon simple cardiac disease, is not only contra-indicated, but is likely to be followed by the most serious and fatal results. It lowers the influence of an organ already enfeebled in its powers, distressed in its action, and altered in its rhythm, so that dropsical effusion increases under its debilitating tendency, and the disease, for which it is administered as a curative measure, is promoted rather than retarded; whilst this hydragogue in renal dropsy, by its powerful operation upon the whole mucous surface of the alimentary canal, carries off a large quantity of those effete matters which the diseased kidneys have been incapaci-

* The early occurrence of a tense and painful epigastrium may be explained by the fact, that the shortness of the left hepatic veins, their proximity to the sublobular veins, and consequently the confined space they traverse, does not leave that room for accumulation or delay in the circulation which may arise in the more distant set of veins in the right lobe. Such an early congestion of the left lobe will, therefore, produce engorgement of its vasa vasorum, and tenderness over its seat, the epigastrium.

tated from doing; and the poisoned circulation has been relieved, whilst the oppressed heart has regained tone and vigour under its use. Indeed, I know of no remedial agent which has been attended with such beneficial effects as the one in question, viz., *Elaterium*, when judiciously administered in renal dropsy; whilst I have known the most serious results to ensue from its misapplication in chronic affections of the heart.

The singular change of colour in the whole body, but especially in the face, which attends the early progress of renal disease, or rather granular degeneration of the kidney, is so marked, and is so decisive, that a physiognomist can frequently make an accurate diagnosis of the morbid condition of these organs and their secretions before he interrogates the patient about his symptoms. The pasty look, the uneasy cast of expression, the puffy under-eyelid, the bluff cheek, the thick upper lip, the dirty skin, and the shining cornea are features too significant to be mistaken by a practised eye for any other morbid change of internal organs. There may not be doughy legs or puffy ankles; the urine may be plentiful, but it is frothy, and looks like muddy small beer; the patient is obliged to make water three or four times during the night, in consequence of the chemical alteration of this secretion, which now acts as an irritant upon the mucous surface of the bladder; his appetite, too, is capricious; he is distressed with flatulence; the alimentary canal is the seat of disease also, inasmuch as its mucous membrane always undergoes a process of softening, which coexists with the progress of the renal disease; he suffers from occasional giddiness and tightness across the forehead; his memory becomes impaired from time to time, and he tells you that he has a nauseous, filthy taste on the palate when he rises in the morning; his bowels are very easily moved, and he is rather more of a relaxed habit than he was wont to be. Now, under such circumstances, the specific gravity of the urine is rarely higher than 1010; but it is found to be loaded with albumen, on the addition of nitric acid or by the application of heat; there is a very scanty amount of urea or of renal salts in it. The blood of the patient is thin, having much serum, and but little fibrine, and few red globules.

I have already stated, that in "*Bright's disease*" the urinary ducts become surcharged with oil globules, and that this change forms the very essence of the disease in question, whilst the secondary effects are light, pale urine, with more or less albumen, from fatty, mottled, porphyry-like kidneys, and a similar change of fatty degeneration of the liver, &c. The preceding quotations from my work at once inform the reader how this change takes place anatomically and pathologically; and it was further remarked, that "crystals of spermaceti-like substance, the stearine of oil, are now formed in the oil-tubes and in the urinary ducts of the kidney. The peculiar shape of the crystal prevents its further descent into the ducts, and from thence into the ureter. Hence the spots where the oil-tubes and urinary ducts adjoin are, for the most part, so many points of disease. Inflammation, suppuration, and minute abscesses are, therefore, most commonly found in the circumference of the cones, and in that portion of the vascular part of the gland where these adjunctions take place, that is to say, the vascular substance around and between the cones." (P. 271.)

"The contents of these abscesses present a brain-like or gelatinous mass, surrounded by a less solid substance, and an opaque or milky fluid. By a careful inspection of this fluid, we may observe a quantity of crystallized spermaceti-like flakes floating in it; the true crystals of oil, as I deem them. These flakes have been examined with much care by Dr. Christison, when he found them to consist of white, brilliant, and silvery scales, soluble in boiling alcohol, from which they crystallized on cooling, insoluble in a solution of caustic potash *." (P. 277.)

"By referring to the course of these oil-tubes, in the chapter where their anatomical description is given, it will be seen that the majority of these tubes fall into the urinary ducts throughout the vascular portion of the kidney; consequently it should not surprise us when we find, as is always the case, that this part of the organ is the first to present an impervious, white, and non-vascular appearance. This forms the basis of the first stage of an albuminous or *Bright's kidney*." (P. 247.)

"The tubular portions are encroached upon and impacted by shapeless masses of fat. This unnatural growth

* It is well known that Chevreul discovered that the elaine or oily substance of fat melts at 45°, whilst the stearine, or fatty substance, is fusible only at 100°, and that, whilst alcohol dissolves 3.2 parts of the former, yet does it only dissolve 1.8 of the fatty substance of animal fat; hence it appears to my mind that any sudden chilliness of the surface of the body would influence the one, whilst the abuse of spirituous liquors, &c. would tend to act upon the other principle of adipose substance, and thus engender "*Bright's disease*."

within and around parts so exquisitely delicate in structure, and so highly important in function, produce most serious disturbances in the action of the whole organ. Many instances have occurred where the tubular structure of the kidney was supplanted by huge lumps of this hypertrophied fat, and nothing remained around them but a small portion of the vascular substance of the organ." (P. 238.)

"But I should have remarked, that the liver becomes, in the majority of cases, the seat of fatty accumulations also; hence a greasy or caseous liver is by no means an uncommon pathological feature in this fatal disease. The heart, from the impeded circulation of the liver, becomes thin in its walls, and dilated in its cavities; fat accumulates around its base and apex, and small, fatty, pendulous bodies are occasionally met with on its semilunar and mitral valves." (P. 239.)

I have made these quotations from my original work on the kidney, in order to rectify any false impression which may have been made upon the public mind by reason of the following paragraphs, which appeared five years after the publication of the work referred to. I more especially allude to a paper which was read before the Medico-Chirurgical Society in 1846 from Dr. Johnson. This author states that "the epithelial cells of the healthy kidney contain a variable but minute quantity of oil globules, and he supposes that the kidneys, as well as the liver, whose cells also contain these globules, serve to excrete fat. His definition of 'Bright's disease' is that it is primarily and essentially an exaggeration of the fatty matter which exists naturally in small quantities in the epithelial cells of the healthy organ. So far," says Dr. Johnson, "as I have been able to ascertain, no pathologist has given any very definite account of the kind of liver disease most commonly associated with Bright's disease; my own observations have led me to conclude that, in by far the greater number of cases of Bright's disease, a fatty degeneration of the kidney is associated with a similar fatty degeneration of the liver." Dr. J. further adds, that he knew nothing of the same views taken by Hecht (*De renibus in morbo Brightii degeneratis*, Berlin, 1839); Gluge, in 1841; Henle, 1842; Canslatt, 1844; and Muller in 1845. But he adds that "the above authors agree with each other, and with myself in the simple and very obvious fact, that, in some cases of renal degeneration, fat in large quantities is contained in the substance of the kidneys; as to the *situation of the fat, and the interpretation of the whole phenomena of the disease, I believe my own views differ essentially from those of any previous observer.*"

Now there are several circumstances connected with the opinion thus expressed that are very remarkable and not easily to be accounted for. First, that this gentleman, whilst pursuing his studies at King's College seven years ago, was desirous of profiting by a few gleanings from the hospital in which I have so many years resided, and he, having left his card for me, made an arrangement with the surgery-man through me, to the effect that he might be summonsed to every post-mortem examination of Bright's disease, which I presume was acted upon, and the advantage obtained thereby accordingly.

Secondly,—That when "The Popular Treatise on the Kidney" appeared from the press in the spring of 1839, I forwarded to the Museum of the King's College, not only the frontispiece to the work, which were engravings most beautifully taken from recent preparations by those eminent artists the Messrs. Foggo, of the human and mammalia kidneys, the size of nature; but also moist preparations, after my own invention, expressly to be deposited in the College Museum, in order to elucidate my peculiar views on that organ, which Mr. Solly generously acknowledged were original exhibitions.

Thirdly,—The admirable translation of Muller's work "*De penitiori Structura Glandularum Secernentium*," by Mr. Solly, appeared in 1841, and it is more than probable that this gentleman looked into a work which was then, and is still, so highly valued; and, if so, he must have seen not only the copious extracts from my work before alluded to, but also the obliging manner in which the translator spoke of it.

It remains, therefore, for the profession to determine which of us two may lay claim to the priority of the discovery; myself, who printed the work in 1839, or this gentleman, who was at that time only in *statu pupillari*, and did not become an author until 1846.

Let us now pass on to the subject of RENAL DISEASE. There is one circumstance which often attends the early stages of degeneration of the kidney, and which I am not aware has yet been noticed by medical writers on this subject; it is the following:—That a severe form of diarrhoea, attended with more or less hæmorrhage

from the bowels, may continue to be unchecked by art for many weeks before the medical man has the slightest suspicion of the existence of renal disease. In fact, the "bowel complaint" is the only one which the patient is supposed to labour under; and, as this symptom arises from a morbid process of softening of the mucous membrane, attended with subacute inflammation of its follicles, it forms a strong argument in favour of the opinion of those pathologists, who ascribe the origin of this and some malignant forms of disease to a "weakened state of the system, arising from depravation of the vital conditions of the part affected, whereby its nutrition, nervous sensibility, and secreting function become specifically changed, and all the fluids and solids ultimately contaminated."

An instructive case, amongst many others of the same kind, occurred in the female wards lately. A woman, aged forty-five, was admitted, with an obstinate form of dysentery. The countenance was much pinched, the face sallow, and the frame somewhat emaciated. She stated that she had been under medical treatment for six weeks prior to her admission, having suffered, during the whole of that time, from constant purging, accompanied with occasional shreds of blood and mucus. She made no allusion to the state of her urinary organs; and, with the use of the infusion of krameria, the diarrhœa became abated, but in less than a week I observed a slight thickness in her articulation, and in the course of the same day we found her unusually sleepy. In my morning visit I requested to see her urine. She declared that she had passed none but with the motions*. The nurse corroborated this statement; and, not feeling satisfied as to the condition of the bladder, I sent for the house-surgeon, who passed a catheter, and drew off half an ounce of pale urine, which I immediately tested, and found it to contain a large proportion of albumen. I now expected the case would terminate fatally, unless the proper quantity of urine should be shortly secreted. She was ordered into a warm bath; her head was shaved; blood was taken from the loins, and turpentine administered internally; but she became more and more comatose; there was complete nephroplegia, and she died in this state in forty-eight hours. There was found after death universal ramollissement of the whole alimentary canal in its mucous surface, with some patches of ulceration towards the lower portion of the colon. The kidneys were degenerated one-third in size, were hard, mottled, and pale, having no fat within or around them; the bladder was contracted to the size of a walnut.

Another case of a similar kind occurred amongst the patients in the male wards. The man was forty years of age, and he had no suspicion whatever that the kidneys were the seat of disease; he applied for admission only in consequence of a protracted and wearying diarrhœa. However, the latter symptom gave way under appropriate treatment; the condition of the renal organs was now attended to; the urine was light, pale, and faintly opalescent by nitric acid; counter-irritants, warm baths, and occasional loss of blood from the loins were ordered, and he left the hospital convalescent; not, however, without carrying with him the undoubted evidences of confirmed granular degeneration of one or of both kidneys.

The more ordinary accession of this fatal disease is, however, ushered in with slight febrile symptoms, after some debauch, or from getting wet through, and sitting in damp clothes. The first evidences which the patient has of illness usually arise from sickness or nausea, a puffiness of the ankles and under-eyelids, and a loss of appetite, with a confused state of his mental faculties. It is in this early stage of the disease that the repeated doses of elaterium, judiciously prescribed, have proved so eminently efficacious. There is a porter at our herbalist's in Covent Garden Market, who supplies the Institution with medicinal plants, &c., and who was the subject of this disease in a more formidable manner than I ever remember to have seen it. His size was so enormous that he could scarcely lie on the ward bedstead; and the scanty urine was nearly solidified with the precipitated albumen from nitric acid. He was one of the most persevering fellows in taking elaterium that I ever met with. He was ordered one-third of a grain every three hours for three doses, and he took such doses three times a week. The vomiting, purging, and disturbance of the whole system, which always ensued after every dose, he bore with comparative ease. The evacuations produced by elaterium in this disease are always from a gallon to ten or twelve pints in quantity, and consist of pure serum, intermixed with numerous shreds of pale lymph-like substance, which, though they have the appear-

* In such instances as the above there is great difficulty in collecting any urine apart from the evacuations from the bowels, as the bladder invariably acts with the sphincter ani, and the two mucous surfaces are so equally irritable that the one cannot act independent of the other, as is the case in health.

ance of epithelium from the intestinal canal, are, nevertheless, I suspect, the elementary forms of fat. This porter often visits the hospital now with his master's articles, and I have made him produce some of his urine, and in testing it I could not find a trace of albumen; the specific gravity was high, and the colour natural. He has since been here also with fracture of the jaw, and I have watched the urinary secretion, but never found it otherwise than healthy. This, therefore, may be reckoned amongst the few instances of perfect recovery from albuminous dropsy; and I certainly attribute his convalescence to the free use of the elaterium, as a means in the hand of God.

It has occurred to my mind that the greater number of instances of acute albuminuria is to be found amongst that class of men who are naturally very powerful in their frames; who eat animal food two or three times a day, and who drink somewhat in proportion; whilst, at the same time, they perspire with freedom at their work. Such mechanics as blacksmiths, smiths, axletree-makers, strikers, &c., I more especially allude to; and in such instances a sudden check to the free excretion from the skin is simultaneously followed by a diminution of the usual quantity of urea and of salts from the kidneys, and albumen is detected as an additional product in the urine.

The deficiency of fibrine and of colouring matter in the blood, the increase of albumen in the urine, and the low specific gravity of the serum in this form of renal disease are so many reasons in explanation of the rapid changes which the system undergoes in this kind of anasarca. Dr. Christison observes: "I am acquainted with no natural disease, at least of a chronic nature, which so closely approaches hæmorrhage in its power of impoverishing the red particles of the blood as the disease in question; whilst the coagulability of the urine and the low specific gravity of the serum of the blood are unequivocal evidences that the disease is established in these organs." This eminent physician has also elucidated the fact, that, whenever the quantity of urea is small in the urine, there is also a scarcity of albumen; but, whenever urea is plentiful, albumen in the urine is likewise increased in quantity*.

This interesting and most important fact having been established, it necessarily follows that its practical value in detecting active or passive disease in the kidneys is of no small moment, and should be carefully attended to by the medical man. If he finds, upon examination of the urine, that its specific gravity is high, varying from 1.020° to 1.030°, and that it contains a copious deposit of albumen, is muddy, not unlike yeasty small beer, then he may safely conclude that the diseased action in these organs is in its earliest stage; during which period, antiphlogistic remedies, as local blood-letting, active purgation by such hydragogues as elaterium, gamboge, jalap, &c., are of the greatest service; but on the other hand, if the urine presents but faint traces of albumen, and continues of a low specific gravity from day to day, varying from 1.006° to 1.012°, then he may be assured that partial obliteration of the secreting portion of the kidneys has taken place, and he will doubtless find, on a careful examination into his patient's symptoms, that other serious disturbances have arisen in organs equally as essential to life as are the kidneys. The blood is surcharged with urea, the nervous system is shattered, the mucous tissues are softened, the serous membranes are peculiarly liable to inflammatory action, and blood escapes from its vessels, especially along the mucous canals, with the utmost readiness; so that hæmaturia, hæmatemesis, epistaxis, and dysentery are frequently connected with advanced renal degeneration. Now, it is by no means an essential feature in this disease that dropsy should make its appearance in any part of the body; I have witnessed repeated instances where we had the most unequivocal evidence of advanced Bright's disease, and yet there was no effusion of fluid into the cellular tissue of the body; and the examinations after death have established the above fact. It is chiefly on this account that the serious disease now under consideration is so repeatedly mistaken or overlooked by medical men, even in the present state of our improved knowledge of it. The urea which should be sent forth from those glands is left to circulate throughout the body, in that fluid which is *its life*—the blood; and other important symptoms then present themselves which mislead the unwary practitioner, and he is induced to treat a severe attack of hemicrania, attended with vertigo, tinnitus aurium, and sickness, as that of threatening apoplexy: the patient is bled or cupped, as the case may be, and shortly afterwards he has a distinct epileptic fit, which is succeeded by another and another, and at length death closes the scene. A *post-mortem* examination of the body is made, and great astonishment follows on finding no disease whatever within the cranium, and only some general fulness of the choroid plexus, with a

* "On Granular Degeneration." Dr. Christison. Edin. 1843.

greater amount of serum in the ventricles than was anticipated ; and thus finishes the autopsy, without any satisfactory knowledge as to the immediate cause of death being attained. I am writing from personal observation, and the fact has come under my notice in private practice, where such has occurred, and, doubtless, others will be enabled to add many more instances with which their memory can readily furnish them.

A medical gentleman, a short time ago, requested my opinion of the cause of death in a case of which he had that morning made a *post-mortem* examination, and which had only left his mind in greater uncertainty, than it was before his patient died, as to the immediate seat of his disease. The man had expired suddenly in a fit of insensibility, ushered in by some epileptic convulsions. The brain was most carefully examined by himself and some other medical friends, as well as the viscera of the chest, abdomen, &c., but not the slightest trace of morbid appearances could be detected anywhere ; and, on inquiring if the heart was flabby and the blood in it thin, he replied that he thought it was so. I then said, "Did you examine the kidneys carefully?" "No, indeed, we did not; and they were the only organs we neglected to look at." I now made particular inquiries as to the symptoms during life ; and the account which he gave me was short, but precise. He had been called to see the man a few days before, in consequence of his suffering from severe sickness, dyspnœa, and vertigo ; these symptoms ran on unabated, and he became slightly comatose, and then had an epileptic fit, from which he rallied, but another fit succeeded the first, and he died. I could not refrain from expressing my strong conviction that, had the urine been tested, and its amount and specific gravity ascertained, he would have found some unequivocal evidences of acute albuminuria, and that he was sadly negligent in not examining the kidneys after death. But these instances of rapid dissolution under the influence of poison by urea, undetected or unsuspected by the medical man, are so common, and have been so repeatedly alluded to in the course of these papers, that further comment is unnecessary.

It is in consequence of this singular and most deceitful train of cerebral symptoms, which are apt to set in with renal degeneration, that I deemed it of the utmost importance to place the disease in the third division of the first class of the physiognomy of diseases, namely, in that of cerebral sympathies in irrationality. If the study of pathology, as well as clinical medicine, was more insisted on by our examining faculty, we should not find the younger branches of the profession so culpably ignorant of this serious and most formidable disease of the human frame, as it is too often witnessed in the present day. It remains, now, therefore, to present a characteristic example of the disease in question :—

Edward Parker, aged fifty-three, a groom and servant in a gentleman's family, applied for admission here on Dec. 28. A well-formed man ; countenance pale, thin, and somewhat distressed. Some emaciation of the body, but no dropsical swellings in any part. Complains only of pains in the head and loins. Urine, he reports, is sufficient in quantity ; but, on interrogating him, he acknowledges that he is disturbed three or five times during the night to pass it. Appetite bad ; bowels rather obstinate. His history was the following :—That he had become chilled after getting wet through two months ago, and this was succeeded by loss of appetite, dyspnœa, and aching in the loins, for which he sought relief at a dispensary. Eats heartily when well, but temperate in his habits.

Auscultation :—Free respiration in every part ; heart's action feeble in impulse and in sounds. On examination of the urine, it was discovered to be slightly albuminous, low in specific gravity, and clear in appearance ; from which circumstances we judged that the disease had made some progress in the kidneys. The treatment consisted in hot-air baths every night, and the compound elaterium pill every other morning *. He was bled to six ounces on two separate occasions, for vertigo, tinnitus aurium, and heaviness over the forehead. He was also cupped twice over the kidneys, with decided relief to his general symptoms ; and, in addition to this treatment, the ung. ant. pot. tart. was rubbed over the loins until a large number of pustules appeared. The internal remedies also consisted of an occasional dose of calomel and compound jalap powder, together with the acetate of ammonia, in a draught, three times a day. Under this treatment he made great progress, but, unfortunately, the albumen on one day suddenly disappeared, and, coexistent with its absence, there sprang up some more formidable symptoms. He was now observed to be heavy and stupid ; the lips and tongue became parched ; some tenderness arose also over the bladder ; the urine was dark and muddy,

* This consists of the following ingredients :—℞. Extr. elaterii, gr. ½ ; cambogio, gr. jss. ; capsici pulv., gr. ½ ; ext. jalap. mollis, gr. iij. ; ft. pil.

which appearance arose from the presence of hæmatin, and there was obstinate vomiting, with total loss of appetite. The urine became darker and more sanguinolent, less in quantity, and all the evidences of suppression were rapidly coming on*. These serious changes crept on about the 21st of January, at which time his head was ordered to be shaved, a blister was applied to the forehead; but yet, although every effort was made to induce a free action on the skin and kidneys, these secreting organs became more and more sluggish, so that on the 25th, until the day of his death, which occurred on the 28th, there was not more than an ounce of dark urine secreted, and there was so much abdominal tenderness, that peritoneal inflammation was evidently set up a few hours before his dissolution.

The *post-mortem* examination took place on the following day. All the organs of the head, chest, and abdomen were healthy, except an unnatural amount of clear serum in the ventricles of the brain, and a thin, pale, and flabby heart, together with recent peritonitis over the pelvis, and around the kidneys, which were large, heavy, and palish. The right was injected in its arteries, and the left in its veins. The reflected membrane tore off with great difficulty. The injection did not fill one-third of either set of vessels. There was abundance of fat around and within both these glands. The uriniferous ducts were hypertrophied; and the venous network on the one hand, and the Malpighian bodies on the other, were for the most part impermeable to the injections, and gave the appearance of a series of abrupt termination of vessels. There was also much extravasation from both injections. The ducts were evidently obstructed by a deposition of foreign matter in them, and this matter I believe was the stearine principle of fat.

A second case of this insidious and fatal disease I cannot pass over:—

G. C., aged sixty, a labourer, applied for relief under the supposition that he had retention of urine, as he positively asserted that he had passed only half a pint during the previous six days. A catheter was readily introduced, but not more than $3\frac{1}{2}$ ounces flowed, deeply coloured, and highly albuminous. His appearance betrayed much distress; he was heavy, like a semi-intoxicated man; his eyes were sunken, but he was rational and collected. He vomited every kind of food; the pulse was slow and laboured; the tongue slightly furred. He stated that he caught cold a week ago, having previously always enjoyed good health. He then suffered from heats and rigors, pain in the head, and giddiness, with suppression of his urine. These notes were taken at his admission on the 15th; but notwithstanding depletion was resorted to, on three occasions, over the loins, yet on the 22nd he fell into a complete state of coma, with epileptic convulsions, and died in a convulsive struggle on the 24th. There was acute and recent pericarditis. The blood was universally fluid. There was dropsy of the left lung and pleura. The kidneys were natural in size, but presented externally the appearance of mottled or Castile soap, but in general having the character of an aggregation of minute glands, of an ash colour, with an intermediate vascular substance, highly injected. On making a longitudinal incision of one, the greater part of its tubular portion, the pelvis, and infundibula were found loaded with and supplanted by a quantity of fat. The urinary ducts were filled with dark blood, so that they presented so many red lines, instead of their natural white and fibrous appearance. The cones were fewer in number than ordinarily. The ureters were pervious. The bladder was much contracted, and its coats thickened. The mucous membrane was studded with dark hæmorrhagic spots, like black currants: this organ was empty. The prostate was not enlarged. The urethra was quite pervious.

I have already expressed my belief† that the essence of this disease is to be sought for in the inflammatory state of the venous network of this organ. But the exciting causes of such inflammation are to be traced up to a sudden congestion of those oil-tubes which adjoin, and fall into, the urinary ducts. This congestion is liable to occur more frequently in those individuals who are corpulent, and who usually possess an excess of fatty deposition within the bodies of the kidneys. Such physical changes are ordinarily the result of cold and of suppressed perspiration. Hence it happens that there are more fatal cases of Bright's disease, and of suppression, in its early stage,

* I have frequently noticed this very unfavourable symptom before. The urine of a patient is found to be slightly albuminous, and, though increasing in quantity, the albumen diminishes in somewhat the same ratio, when a sudden or, perhaps, gradual outbreak of symptoms of cerebral disturbance ensues; suppression now follows, uræa circulates, and the patient rapidly sinks, either in a comatose state or with a severe attack of epileptic fits.

† Treatise on the Kidney and its Oils, 1839.

amongst the male than amongst the female sex; and of these the hard-working, muscular, vigorous artizan is the most prone to fall a victim to it.

IN SCROFULOUS ENLARGEMENTS OF THE MESENTERIC GLANDS we may notice the same pallor of the countenance which has been already referred to under the previous diseases; the abdomen is large, tympanitic, hot, and the surface shining; the features are much pinched, the nose is pointed, the eyes sunken, and the slow and attenuating character of the disease is strongly depicted in the face. The same observations, in a less degree as respects the physiognomy, may be made in those protracted forms of *ENTOZOA*, where the constitution has already begun to sink under the influence of these parasites. The debilitating effect of these inhabitants of the alimentary canal is more evident in the constitution of young people than it is in that of adults. I have alluded elsewhere to the varying, insidious, and deceitful train of symptoms which attend the presence of *entozoa* in men and in women.

CLASS IV.

Division I. *Abdominal Seizures; Countenance pinched.*

From Colic.	From Constipation.
„ Colica pictonum.	„ Intus-susception.
„ Gall-stones.	„ Hernia.
„ Urinary ditto.	„ Ascarides.
„ Spasm of gall-bladder.	„ Peritonitis.
„ Gastralgia.	„ „ nervous.
„ Cholera.	„ „ acute.

If the physiognomy of cerebral diseases has its peculiarity in the lethargic countenance, and that of thoracic diseases in the dusky countenance, then assuredly those acute and exquisitely painful attacks in the abdominal viscera exhibit their characteristic traits in the physiognomy in a striking manner. It has been already remarked, that whilst the countenance is so very expressive of disease when it exists in either of the three large cavities, so the change of colour, the tinge, the emaciation, the peculiar cast of the whole face, is sometimes more expressive of the disease than the features themselves. In short, one may offer the general remark, that an alteration in the *features* of the countenance constitutes the main physiognomical character in acute diseases of vital organs; whilst an alteration in the colour, substance, vigour, and health of the face is peculiar to the chronic changes in organs which may ultimately destroy life.

Let us, for example, go to the bedside of a patient suffering from an acute seizure, either of *COLIC* or of *PERITONITIS*, and we may notice, first, the corrugations of the orbicularis oculi; the knitted brows, a perpendicular furrow formed thereby from the base of the nose up the forehead, the retraction upwards and outwards of the inner parts of the cheeks, the slight dilatation of the nostrils, the half-opened mouth, with its angles drawn outwards, the chin thrown slightly forwards, and the teeth clinched; can we not read the seat of pain as though we heard it expressed by the sufferer? Pinched features, such as these, cannot, physiologically, belong to cerebral disease, and certainly neither the pneumo-gastric nor the phrenic nerve can command the muscles of the face so as to produce this kind of physiognomy. The brain, as a viscus, is endowed with no more sensation than the heart or the lungs; but the intimate communications of the abdominal viscera with the nerve of expression, namely, the *portio dura*, through the medium of the great sympathetic, readily explain to our minds why so much suffering is portrayed on the countenance of an individual who is labouring under some acute abdominal inflammation.

I have said nothing hitherto of gait or of posture. The patient who labours under abdominal pain will not allow the peritoneum to be kept on the stretch by an erect posture; he therefore stoops slightly forward, or, if in bed, he rolls from side to side, if it be simple colic, but lies on his back if peritonitis exists. The flanks are more

tender in the latter disease, whilst the region of the umbilicus is more painful on pressure in enteritis. On the other hand, firm and equal pressure affords relief in a sharp attack of colic, or in the passage of gall-stones.

Acute tenderness of the ensiform cartilage and a very small space below it attends gastralgia, or an attack of dyspepsia. A fetid breath, not unlike to mercurial ptialism, accompanies a fit of colica pictonum. But if peritonitis has gone on to effusion of coagulable lymph, or enteritis to incipient gangrene, or intus-susception and hernia to sphacelus, then, in addition to the above sketch of the physiognomy of these diseases, we have not only pinched features, but a haggard, distressed, and most anxious countenance; the lips and cheeks are moistened with a clammy or greasy secretion, and a slight cast of horror can be read in the countenance of a patient thus dangerously affected. The mind is unclouded in all these diseases at their onset, and the respiratory organs are rarely disturbed in their functions.

My friend and late valued house-surgeon, Mr. Hetley, whilst officiating for me during my temporary absence from town, received two men into the medical wards, both of them by trade house-painters. They were placed under the care of the physician of the week, Dr. S. Thompson. Both were similarly affected; the countenance in each was anxious, the features pinched, the abdomen full; the pain, referred to the arch of the colon, was relieved by pressure; vomiting, a full pulse, and constipation of four or five days' duration. As the ordinary treatment for colica pictonum did not succeed—such as warm baths, with copious injections of warm water whilst in the bath, sinapisms, opium, and calomel—they were both ordered to be bled in the bath to fainting. This had its desired effect in one case; the spasmodic action of the muscular coat of the bowels was overcome, and they began to act copiously, with perfect relief to the patient, whilst, in the other man, the symptoms were rather aggravated than otherwise. He grew worse and worse; calomel and opium were freely administered; little or no pain was experienced on pressing the abdomen, still the countenance betrayed more distress than was warranted by the amount of suffering. The bowels would not act; delirium supervened, and we were persuaded that either intus-susception or internal hernia could alone explain the continuance of these formidable symptoms; he rapidly sunk, and died ten days after his admission, having had no evacuation from the bowels for a fortnight. There was found a whipcord-like band of mesentery passing over the bowel, the ilium, and gripping it as firmly as if it had been tied by manual dexterity. There was also enteritis and peritoneal inflammation of the adjacent parts.

Very soon after the occurrence of the above two cases, I was hastily summoned to visit one of the nurses in the surgical wards, Dec. 1st, whom I found lying on her back with a most anxious countenance, writhing in pain across the bowels, a rapid feeble pulse, cold extremities, hiccough, and vomiting. I naturally suspected internal hernia; but this idea was soon removed by a free action of the bowels from a large dose of calomel and opium which I administered. However, the symptoms became more and more alarming, and I was, therefore, desirous of obtaining the opinion of one of my senior officers, when she was ordered two dozen leeches to the abdomen, a continuation of the calomel and opium in smaller quantities, the inunction of mercurial ointment to the arms, and the following draught to allay the vomiting and hiccough:—Ac. hydrocyanici dil. m. iv.; sod. sesq. carb., gr. v.; aq. menth. vir., aq. dest., aa. ʒvj. 6tis. Her former history was the following:—Ten years ago she was a nurse in an hospital, and was there laid up with a hernia on three separate occasions. A year and a half ago she was in our wards, with jaundice and great depression of spirits, suffering from occasional severe pain through the hepatic region; and on one occasion she passed some solid lumps from the bowels, which gave her great pain in their exit, but which were incautiously thrown away (gall-stones?). She began, however, to improve from that time. A year ago she was again on the sick-list with a severe and prolonged attack of melæna, accompanied with active hæmatemesis, so that she was at the point of death—pulseless, and with cold extremities. The crystals of gallic acid, then prescribed in six-grain doses every four or six hours, arrested any further hæmorrhage, and she recovered, in some measure, her strength; but subsequently she became anasarous, with albuminous urine, from which she perfectly recovered, and resumed her duties in a surgical ward. The progress of this case, however, was now unusually rapid; and it should be observed that the pain, which at the onset of the attack was confined to the hepatic region, over the space of half-a-crown in size, and was relieved by firm pressure, now extended to the flanks and pelvis; one small fæcal evacuation did not relieve it, and the features soon became pinched, the countenance anxious, but not jaundiced, whilst the

vomiting of bilious matter was incessant; the hernia was down, but easily reducible. These symptoms increased, uncontrolled by art, and death ensued in thirty-six hours from the period of the seizure.

Post-mortem Examination sixteen hours after Death.—There was acute peritonitis; the liver was large, pale, and fatty; the gall-bladder was contracted to the size of half an inch in length; it was quite pale, and was divided into two compartments by an old band, apparently the cicatrix of the mucous membrane, across its upper part; the orifice was very tortuous, and was completely blocked up by small white calculi, not more than three grains in weight altogether; the cystic, hepatic, and communis choledochus ducts were all filled with bile; the duodenum was much dilated, and its mucous membrane was vascular; a chain of enlarged and vascular glands lay between the transverse fissure of the liver and spine below to the right, but parallel with the hepatic duct. There was the sac of an inguinal hernia on the left side, but it contained only the round ligament, and hæmorrhage had taken place into the ovaries. It should be observed, that her habits were once those of very great intemperance.

My chief desire in the present classification is to throw together a few striking cases of acute diseases of the abdomen, in order that the mind may be tutored to notice how little dependence is to be placed upon a well-arranged set of symptoms, however ingeniously laid down in a didactic form, throughout medical works, for the guidance of the student, and that the general outline and broad features of these diseases can only be given, whilst the finer shades must be filled up and pondered over by the experienced physician or clinical observer.

A few days ago I was called out of my bed at three A.M. to see a patient who had walked to the hospital in order to obtain some relief for a violent pain in his bowels. On entering the surgery, my eye met a robust and fine young man pacing to and fro, with his body half bent, his hands on the abdomen, and uttering groans of agony. On looking at his countenance, it was palpable at one glance that the poor fellow really suffered, and acutely too. He had a most peculiar, sharp, and anxious expression; his colour was gone, and his cheeks presented a greasy surface and a pale fawn tinge. The pulse was full and quick; the tongue furred, and rather dry; the bowels confined for two days, and he was sick. Suspecting hernia, I questioned him, when he acknowledged that he was ruptured, but had not worn a truss lately. On examining the scrotum, I found a large inguinal hernia on the right side; it was down, very tense, and extremely painful; he, however, returned it readily, yet there was a nodule felt over the inner ring. I placed him immediately in a hot bath, and put ten grains of calomel on his tongue. He was then left in charge of the bath-man, whilst I went to request the attendance and opinion of the house-surgeon, Mr. Dixon. This gentleman agreed with me, that the substance over the ring was not intestine, but, as he suggested, might be a thickened portion of the spermatic cord. We determined on bleeding him to syncope in the bath, and twenty-five ounces were abstracted before he fainted. We had first injected three or four quarts of warm water up the bowels without any decided relief; but as soon as he was comfortably placed in bed he expressed himself relieved beyond all expectation, saying to his wife, "Oh, mother, if I hadn't come here, I should have been a dead man by this time." This was at four o'clock. I then left him, with orders to apply twenty-four leeches to the abdomen, to take two grains of calomel and half a grain of opium every four hours, and to keep up a constant fomentation over the bowels. At seven I was again summoned to him, as the pain had recurred. But, before I proceed, it would be right to observe that he distinctly stated that he was well the previous day at four o'clock P.M.; that he sat down in his chair and fell asleep, and was suddenly awakened by an acute pain over the pubes and around the umbilicus; that he sent for some medicine, which he took, and went to bed at nine; he obtained some relief, and fell asleep, but was awakened at twelve, or midnight, by the violence of the pain, and got up shortly afterwards, and with great difficulty he walked to the hospital. But to return. When I was thus called, his countenance was greatly altered; rapid dissolution was marked in every feature; his skin was becoming cold and clammy; he had passed several motions without relief, and, as he expressed a strong wish to have another hot bath, I reluctantly consented to it.

At nine A.M. the nurse came, requesting me to come up immediately, as they were afraid the man would die in the bath. I followed her into the room, fearing the result, when I found the poor fellow lifeless on the floor; they had just time to drag him out of the water before he expired, which took place exactly seventeen hours after the accession of the pain.

Post-mortem Examination Eight Hours after Death.—There was acute enteritis of the small intestines, and some

coagulable lymph over the peritoneal surfaces of the bowels. In removing the latter there was found, at the commencement of the ilium, an aperture the size of a sixpence, with the mucous membrane so completely everted and puckered, that the aperture, whilst *in situ*, was not larger than a split pea. There was not the slightest trace of disease in this part of the bowel, but its contiguous portions were highly inflamed. There was no intestine in the hernial sac.

I cannot refrain from adding the following instructive case also, as recorded in my case-book, by way of comparison with the last-mentioned one.

OBSTIPATION DURING A FORTNIGHT; REDUCIBLE HERNIA; PASSAGE OF BILIARY CALCULUS.

Samuel Wilson, admitted Feb. 14, aged thirty-five, a bulky man, a servant. Was first seen at five P.M. (candle-light). Nothing remarkable in his general condition; says he has griping pain across the abdomen immediately below the umbilicus, which is relieved by lying on his face, or by firm pressure; abdomen flaccid and unresisting; bowels have not acted freely since the first of the month, although he has taken quantities of aperient medicines, and has had enemata; nausea and occasional vomiting; hiccough; tongue furred; pulse 96; skin cool. On ascertaining these points, he then referred the commencement of the attack to a sudden pain in the bowels a fortnight ago, which has remained unmitigated by baths, leeches, V.S. ad ̄xxx. , and a blister. He casually told us that he had "a rupture of three years' standing," which proved to be inguinal, and was easily reduced by himself; having passed it up, there remained at the internal ring a distinct knob, which gave the sensation of a knuckle of intestine; the whole hernia was very painful, and had been so since this attack. A gallon and a half of warm soap and water was thrown up the bowel, but it immediately returned without any fecal matter. During this operation, the hernia was kept up by the house-surgeon's hand, who felt the nodule suddenly disappear when a gallon had been injected. He declares that he is a temperate man, and that he has always had a daily evacuation from his bowels until this attack. R Hst. efferv. c. mag. sulp., ̄j. 2dis donec alvus respondeat.

15. This morning, on visiting him, he is seen to be tinged of a deep yellow in all parts of his body. His pain is acute, and he rejects everything but the draught. Has had no sleep, and the bath, ordered early this morning, only relieved him for ten minutes. On pressing the hepatic region, he evinces great distress; and, hearing us remark that gall-stones might probably be making their way downwards, he said that seven years ago his medical attendant informed him, whilst labouring under a similar attack, that he then passed a gall-stone. Urine contains bile. R Emp. belladonnæ reg. hepatis. Rep. hst. c. tr. opii., m. v.

16. Has passed twelve watery, mahogany-coloured, fetid evacuations, some solid matter in each of them, but generally watery, which, on being poured off, leaves numerous dark-brown lumps at the bottom of the vessel, and when dried present a metallic lustre, and one distinct pea-shaped calculus was also detected. Is the former cholestrine and the latter picromel with salts?

18. Several more fecal evacuations, with similar lumps of dark matter. Is in less pain, but thinks it is altered in its situation, being now most acute about one inch to the right of the umbilicus, and he describes it as a "sticking" or a "stabbing" pain.

20. From this period he gradually recovered his strength; the jaundice went away, the bowels became regular, and, having obtained a new truss, he left the hospital convalescent.

He was again admitted two years after the above date with severe bronchitis, and was then in *articulo mortis*; he had had no medical treatment, and died two days after his admission. The *post-mortem* examination elicited nothing more than general and very acute inflammation of the whole bronchial surface.

I have already grouped together, in the preceding remarks and cases, diseases which are so alike in their general features and signs, that, for the sake of clearing away any confusion that might naturally arise from such a collection of symptoms, I may briefly add, that, in the first place, ordinary colic, besides the physiognomical character of abdominal seizures, is attended with more or less sickness, a quiet pulse, absence of fever, relief to the pain on pressure; whilst in painter's colic, in addition to these symptoms, we find a blue gum around those teeth that have some tartar on them, a fetid, metallic breath, and the obstipation is more severe. There is sometimes also suppression of urine,

and even an intermittent heart in this form of colic; if any weakness exists in the hands or wrists, it may be always noticed in the right adductor pollicis, if the workman is right-handed. In the passage of gall-stones, however, the symptoms are rather more urgent than in the preceding two forms of abdominal seizures. There is sickness; a jaundiced eye; pain over the gall-ducts; constipation, and more or less febrile excitement, with high-coloured urine. But in the descent of a urinary calculus the pain and numbness down the ureter and thigh are amongst the early evidences of this nephritic seizure. Suppression of urine then follows, vomiting, a sense of distress around the umbilicus, with a constant wish to get a free evacuation from the bowels; a feeling of weight or acute pain across the loins or over one kidney. But in constipation arising from intus-susception, or from internal hernia, the symptoms are much more insidious. The sense of pain is not great at the onset; costive bowels and slight fever are the only early intimations to the patient that he is out of health. These symptoms are probably neglected, and sickness with pain over the abdomen supervenes, when he is obliged to seek for some relief. Pressure around the umbilicus, when inflammatory action is set up, always increases the pain; he can lie upon his back or on his sides, but usually draws his knees up in the bed; whilst in acute peritonitis the flanks are most tender on pressure, there is less constipation in this form of inflammation, and the countenance is more indicative of serious mischief than in any form of acute abdominal inflammation.

But, as there is a pleuritic pain too often mistaken for pleuritis, so there is also an acute pain over the abdomen, which is frequently attributed to peritonitis. There is, therefore, such a thing as a *FALSE PERITONITIS*, and it is more commonly met with in the female than in the male subject. The outline of the disease is as follows:—The countenance is pinched, the features contracted, the knees are drawn up, the patient lies on her back, the tongue is furred, the breath fetid, the pulse frequent, but the skin is cool. When the physician's hand is laid upon the abdomen (which is passive in respiration), she shrieks with pain, and cries out before actual pressure is made; but if the hand is kept upon the abdomen, and the patient's mind preoccupied with some conversation, such as interrogating her about the origin of the attack, &c., and gradual pressure is continued by the hand, it will be apparent that she does not experience more pain than she did by the slightest touch of the hand. In this state the bowels are always torpid, and, very frequently, a warm hip-bath and a brisk cathartic with calomel, together with the application of a sharp and large sinapism to the whole abdomen, will remove all these untoward symptoms. Depletion is certainly not called for in one instance amongst a dozen. The agony which I experienced some years ago from an attack resembling the above description was so great, that I firmly believed that it was the result of a urinary calculus descending into the bladder: the pain darted through the kidney, down the right ureter, along the urethra and thigh, and brought me into a most copious and protracted perspiration. A full dose of calomel and black draught were the means of completely relieving me in a few hours. It was a morbid collection of crude matters in the head of the colon.

It is of the utmost importance, in order to arrive at a correct diagnosis of the nature of these, oftentimes, obscure and insidious cases, that the medical man should set aside all delicacy of feeling, and insist upon exposing the bare abdomen, even in the female; because the active or passive state of the abdominal muscles in respiration, or their free play in the upper parts, and their tense and inactive condition in the lower portion of the abdomen, will frequently point the mind, as faithful sentinels, to the seat of actual pain and suffering. Dr. Watson relates the instance of a gentleman who died from obstipation in consequence of the appendix cæci becoming filled with half-digested olive kernels, which, curling around the bowel, had obstructed its canal. I remember a similar occurrence in a man at Oxford, who suffered from obstinate constipation after swallowing the stones of some cherries he had eaten, which lodged in the same spot, and caused his death.

Before I leave the subject of peritonitis, I must advert to one or two points of importance in the treatment of this formidable disease. Like all other acute attacks, we can scarcely anticipate any favourable result if our treatment is not active and judicious during the first twenty-four hours after the accession of the disease.

There does not appear to my mind to be a sufficient stress laid by authors upon the powerful agency of local and repeated blood-letting in peritonitis. This remedy, in order to be efficient, should be thus adopted. Four or six dozen leeches should be sprinkled over the flanks, and the whole abdomen afterwards enveloped in a light flannel

soaked in poppy fomentation, whilst a layer of gutta-percha sheeting, or of oiled silk, should be placed outside the flannel. This application is more supportable than a large heavy poultice, though the latter certainly encourages the bleeding more than a warm or a wet flannel. In the course of six or eight hours, that is to say, as soon as these leech-bites have ceased to bleed, another two or three dozen leeches should be again put on, and again repeated, as soon as these stop, for three or four successive periods, until the abdomen will bear the firm pressure of the hand. This is a most useful mode of applying this remedy; the serous membrane becomes drained of blood, and the acute symptoms frequently abate, even when large depletion from the arm has utterly failed to relieve the patient, and the capillaries of the inflamed surface have not been permitted to fill themselves again, as is the case in those instances where leeches are applied at intervals of twenty or thirty hours. I have further witnessed the most extraordinary results from the employment of large doses of calomel and opium in cases which appeared hopeless. One instance may here suffice. A woman was in St. Bartholomew's Hospital, in the Surgeons' Ward, under the care of the late Mr. Earle, when she was seized with acute peritonitis. The symptoms ran quickly on in spite of repeated leeching, and small doses of calomel, opium, &c. This gentleman called in Dr. P. M. Latham, who held out but a faint hope of recovery, as the countenance had become shrunk, the features haggard, the skin clammy, and the pulse faltering. However, the latter gentleman determined on administering a full dose of calomel and opium. Twelve grains of the former and four of the latter were accordingly placed upon her tongue, and she fell off dosing for several hours, and to our surprise, on making the morning visit, she was sitting up in bed, nursing her child, which was about six months old.

I have witnessed the same decided benefit to follow this treatment in other cases of peritonitis, where all further depletion was quite inadmissible; one of which is alluded to by Dr. Watson, in the following words:—"The last leeches mitigated the pain, but it returned in the evening with increased severity, and he vomited the pills (calomel and blue pill, three grains of each). He appeared to be in great agony. In this state the apothecary (Mr. Corfe) gave him twelve grains of calomel, and five grains of opium, in one dose. Soon after this, he fell asleep, and slept during the greater part of the night. Next morning his countenance had lost, in a great degree, its expression of anxiety; his belly was less tender, but still tense; and his tongue cleaner. No stool*." This gentleman continued to administer grain doses of opium for several days, and the patient became ultimately convalescent.

But two cases of abdominal seizures are now especially before my mind, and which, but for the timely discovery of their real character, would, in all probability, have ended in death in a few hours, whereas the detection of the true cause of the obstipation was the means of saving the lives of both patients. The first instance was in that of a female, who was admitted into St. Bartholomew's Hospital under Dr. P. M. Latham for constipation of three days' duration; there was no great suffering, nor did she experience any inconvenience beyond the uneasiness in not having a due action of her bowels. This gentleman prescribed some aperient medicine, and she was left until his visit on the following day, when it was found the bowels had not acted, and that there was some nausea and distress over the abdomen. On examination of the inguinal and femoral rings, there was discovered over the latter a small, hard, cob-nut-like swelling, not painful, and yielding no impulse on coughing. She knew nothing of its origin, nor even of its existence. A consultation was immediately called, when Messrs. Earle and Stanley proposed cutting down upon the swelling, under a strong conviction that it would prove a glandular body; the former gentleman was the operator, and, when he had exposed the foreign lump, it was discovered to be a knuckle of intestine, just like a red cherry in colour and in size. It was returned, and every thing went on favourably until her convalescence.

The second instance occurred a few years afterwards, in this hospital; the patient also was a female. She had walked from the suburbs of London, I think it was Chelsea, to visit her sister, one of the day-nurses in the surgical wards in this building, to request her to seek some advice for her from one of the resident officers of the charity. She accordingly brought her to me—it was on Saturday afternoon—and informed me that she was sick at stomach, bilious, and costive in her bowels. Here, also, it may be remarked, the patient apparently suffered very little; the

* Lectures on Practice of Medicine, vol. ii. p. 358.

features were placid, and the pulse was tranquil. As she had walked a long distance, and was tired, I suggested that she should stop here for the night. She was accordingly sent to the medical ward, and was ordered some calomel and colocynth at bedtime, and an aperient draught in the morning. On Sunday, at eleven, I visited her, and found that she had rejected the draught, and was somewhat uneasy in her bowels. I now carefully examined the several rings, and found a nodule, the size of a small walnut, over the femoral ring, which she urged was of no consequence, as it had been there for many months, and was no inconvenience to her. However, I casually heard Mr. Arnott's voice on the staircase, and called that gentleman to examine the tumour, when he immediately decided on cutting down upon it, and, after summoning his colleagues and gaining their assent, the tumour was laid bare, when it proved to be a knuckle of intestine, as black as a pickled walnut. The stricture was divided, and the intestine sloughed; an artificial anus was thus formed, fecal matter was wholly discharged from the wound for six weeks, when it gradually ceased, and the evacuations passed along the natural channel; she now had healthy actions from the rectum, and the wound rapidly healed, and she was discharged quite well, and is still living in the neighbourhood of London.

GASTRALGIA.

The stomach is the seat of disorder, or of disease; the former may exist without the latter, whilst the latter cannot exist without disturbing the natural functions of this organ.

A pale sickly female applied for admission into the hospital. She was lady's maid to an officer of high rank in the army, who was in India, but who had sent his family home to England; at the Cape the children were seized with measles, and she was much worn down by constantly attending them. During her passage home she lost her appetite and her strength, and was unable to keep any food upon her stomach except a little bread soaked in tea, which had been her only nourishment for six months. She took tea morning and evening, and enjoyed it, and nothing else; in fact, she dared not venture to take any other food, having suffered so much from the repeated attempts made to nourish her by generous diet. Did not this look like scirrhus of the pylorus? But there was no yeasty matter vomited, either after food or whilst fasting, as is invariably the case in true pyloric disease, when it is attended with sickness*. I asked her if she would think it a hardship to leave off tea, and to drink cocoa-shells boiled with Naples biscuits, to which she readily assented; and wonderful indeed was the change which followed, for in ten days she said, "I really do think, Sir, I could eat a chop." It was allowed her; and in three weeks from that time she ate the ordinary hospital diet. She went out, evidently fattening, resolved never again to touch tea, and returned to visit the nurse six months afterwards, when I saw her so plump, fat, and rosy, that I could scarcely recognize the same features.

Whilst, in another instance of a female, there was a distinct tumour in the epigastrium, moveable and circumscribed; but she presented the appearance of health, and had no sickness after food, and enjoyed a very good appetite. We looked upon the tumour as a fecal collection in the arch of the colon; but all purgatives were unavailing, and made no impression upon its size, except that large enemata thrown up drove it from our view and touch. She suddenly became very ill, and rapidly sunk; when the tumour proved to be a large mass of scirrhus pylori, lying behind a flatulent and distended colon.

I must now allude to a disordered state of the stomach, which may be called a diseased nervous condition of this organ, but which reacts upon the heart and liver so as to induce such a peculiar train of symptoms that the patient and the medical man are often misled into the supposition that one of the latter organs is the seat of disease. The following instance will point out this disorder very manifestly.

A medical gentleman, lately an officer in this establishment, was very fond of taking coffee in the evening, and had always done so with impunity whilst he led an active and bustling life, with much exercise in the open air; but, after he had become immured within the close walls of this hospital for six or nine months, he complained of being watchful at night, of having palpitation and restless dreams; he left off smoking, but still he was troubled with

* Dr. Baillie, in his "Morbid Anatomy," mentions the rarity of sickness as a symptom in scirrhus of the pylorus; this observation has been authenticated by subsequent pathologists.

disturbed nights. His liver became torpid, his bowels sluggish, and his appetite capricious; he was now in robust health to all appearances, yet he was always complaining of one unpleasant symptom or another. I recommended him to leave off coffee in the evening, but he could not be prevailed on so to do; however, finding himself worse and worse at night, he resolved on substituting tea. This made matters still worse; until a severe attack of palpitation, horrid dreaming, and cold perspiration alarmed him to such a degree, that he was glad to leave off tea and take to cocoa-shells. His liver being unloaded, he soon gained temporary relief. His imaginary cardiac disease was gone, his nights were sweet and refreshing, and he continued the cocoa for some weeks. However, thinking himself strong and hearty again, he ventured upon tea, and upon coffee on several occasions, and whenever I heard him describing his uncomfortable dreams, intermissions of heart, &c., I could always trace it to his having abandoned his cocoa, and resumed his tea or coffee. I have heard from him since he entered again into public practice, and he has had several attacks of a more formidable kind, as he apprehends, and thinks he now has confirmed cardiac disease; whereas, if he is moderate in his diet, and careful in the beverage he takes morning and evening, this nervous excitement of the stomach wholly disappears, and he is strong and hearty.

Far different, however, is the case of a medical gentleman who occasionally visits me for an opinion as to the state of his chest. He has been much on the Continent, but has not lived an irregular life; neither has he ever had rheumatism; yet has he one of the most irregular, intermittent, tumbling hearts that I ever remember to have listened to. Indeed, it cannot be said to be heard to contract at all; it is one confused rolling and tumbling; there may be a slight diastolic murmur. But the most extraordinary part of this gentleman's case is this, that he is not sensible of any uneasiness in his chest, or of any irregularity in his heart, and was surprised when an eminent physician recommended him, after listening to his chest for a slight cough which he then had, to go and consult another medical friend and relative, also a physician; but, as the latter declined to give an opinion, and, being rather alarmed at the singular action of the heart, he requested me to listen and inform the young man my opinion. His nights are good, and his appetite equally natural; and, although I have now seen him several times over the space of two years, yet I always find that he expresses himself as he did on the first visit, and feels that he has nothing the matter with him that he is aware of. Of course I declined prescribing or recommending any line of medical treatment, as he suffers from nothing. The only clue which I can possibly get to this extraordinary state of circulation is this, that whilst in Berlin, some medical acquaintance suggested his taking small doses of belladonna internally for the purpose of watching its effects; he accordingly undertook the experiment, and commenced with one-eighth of a grain, until he arrived at two grains as a dose, when he became comatose, delirious, and was very ill for several weeks, but was not aware that he had any thing wrong in his chest. He is sure his heart was regular before he left England for the Continent.

Again, there is a class of diseases of the stomach which so assimilate that it is almost impossible to detect the serious from the trifling, the organic from the inorganic changes, or the disordered from the diseased functions. A female applied, amongst many such, complaining of acidity of stomach, distress after food, sluggish bowels, and tender epigastrium, with flatulent abdomen. As soon as her food was in her stomach her distress commenced, and oftentimes she could obtain no relief until its contents were thrown up, and in order to obtain this relief she has irritated the fauces and brought on sickness. There was pyrosis also. Now, a warm aromatic draught, with a full dose of alkali in it, administered an hour before meals*, and a brisk purgative of calomel and colocynth at night occasionally, removed these unpleasant symptoms very shortly. They depended upon an excessive and, therefore, morbid secretion from the coats of the stomach (hydrochloric acid), which is only relieved by an antidote to its irritating character.

But, on the other hand, a young woman applied here, having just the same symptoms, and was treated in much the same way, at least upon the same principles, during a fortnight, when she suddenly became worse, and died in a few minutes. Here was found a large ulcer, the size of a shilling, on the dependent or larger arch of the stomach, which it had perforated, and the contents of the stomach were in the peritoneal cavity.

* Such as the following :—℞. Sodæ sesq.-carb. gr. x.; spir. ammon. arom. 3ss.; tre. cardam. co. 3i. Inf. caryophylli 3x. ft. haustus.

It has been a matter of question amongst several pathologists of late years whether the last-mentioned fatal disease is more common to the male or to the female sex. The experience of this hospital tends to prove that the proportion of fatal cases in the females is as ten to three in males.

I need scarcely touch upon the subject of MALIGNANT CHOLERA, as the disease, through God's mercy, is no longer a fearful scourge in this land; and, although I had to witness many painful instances of this formidable epidemic, yet the knowledge which I possess of its treatment is so shallow that I am unable to contribute any information upon the subject.

The rapid alteration of the features from health to that of death-like exhaustion; the rice-water evacuations; the cramps; the incontinence of urine; the cold breath; the icy tongue; the sodden and blue fingers; and the vox cholericæ, are sure forerunners of the fatal issue which awaits the patient. The only successful line of practice which I witnessed during the epidemic in 1832, was certainly that of Dr. Stevens' saline treatment; the form in which we then administered it continues to be now beneficially employed in this hospital in severe cases of spotted fever, attended with great depression of the vital powers; with a congested pulmonary circulation of carbonized blood; and a mottled state of the extremities of the body.

The saline draught thus administered is given in the following manner:—R Potassæ chloratis gr. vi; sodæ sesqui-carbonatis ʒj.; sodii chloridi ʒss. in spearmint water every four, six, or eight hours; but it is suspended if purging supervenes, and another form is substituted, consisting of a drachm of the chlorate of potash in a pint of barley-water, and I am quite satisfied that both of these forms are most valuable in the frightful type of fevers which we are constantly receiving into our wards from the wretched haunts of the destitute poor of the metropolis. Strong beef-tea, equal parts of milk and barley-water, as a beverage, are the chief articles of diet; wine is certainly contra-indicated in the majority of cases thus treated; and yet it must be acknowledged that some few instances of convalescence have seemed to owe their preservation, as a means, to stimulants, of which wine formed the chief one.

CLASS V.

Division I. *Enlargement of Organs, Glands, &c.; Countenance, according to acute or chronic stage, harassed, &c.*

From Goitre.	From Glossitis.
„ Tonsillitis.	„ Scrofula.
„ Cynanche parotidea.	„ Erysipela.

It must be apparent that I have drawn but a very brief sketch of many diseases which are enumerated in the preceding classes; but it should be borne in mind that I do not here profess to give didactic accounts of each or of all of those diseases, much less an elementary treatise upon any one disease; but my object has rather been to enlarge upon subjects of practical advantage, and to present to the medical man those valuable lessons which I myself have learned, and am still daily learning, at the bedside of the patients in the hospital. I do not scruple to acknowledge that I never could sit, whilst “*in statu pupillari*,” to hear a couple of dozen lectures on the practice of medicine; my mind recoiled from such wearisome labour, and it was not relieved, in any degree, by the classical erudition and scholastic definitions which my professor, the late Sir George Tuthill, was wont to present us with. My delight was, and still is, to be occupied at the bedside in the investigation of disease; the control which remedial agents are allowed to exercise over it; in tracing its varied shades, its progress, its complicated forms, its eventful crisis up to robust health, or down to death; and then to pursue those investigations in their order in the *post-mortem* examination-room, and thus to be enabled to profit by what had gone before in the further practice of similar diseases. I was always encouraged in this pursuit by the practice and exhortation of my valued teacher Dr. Peter M. Latham, whose close interrogatories with his pupils in his clinical lectures at the bed-side, as well as in the dead-house, were worth, to every inquiring mind, the value of ten thousand dry aphorisms. I may also observe here, that

I do not believe that I have spent twelve hours, since I first entered this institution eighteen years ago, in reading any elementary work on medicine; for, whenever I have heard some of the judicious remarks which any one of the members of our medical staff have made, my disposition has usually been to hasten to the bedside to analyse, observe, and impress upon my own mind the accuracy of those remarks from the living subjects, rather than to pore over the writings, however excellent, of a deceased author.

We have now arrived at a point in the classification of diseases in which the countenance is less indicative of internal changes than in any of those which have been enumerated; notwithstanding this, we have an index here also, though the points of the dial are feeble compared with some others.

In the first-mentioned complaint, GOITRE, the alteration of structure is too palpable to escape detection; neither is it a serious malady, so that we rarely witness the disease except amongst the out-patients. The old-fashioned practice of sponge-lozenges, together with the daily use of electro-galvanism, or merely of galvanism, has fallen somewhat into undeserved neglect. The powerful influence of this remedial agent in promoting absorption has been very striking in some instances of bronchocele which I have witnessed. I allude to one especially in a female member of my own family, where it completely removed the enlargement as often as it recurred. I cannot say that the trochizæ spongizæ which were daily taken did not assist in producing a subsidence of the tumour. I have never seen any good effects follow the insertion of setons over the gland, and, as it only distresses and worries the patient without any manifest advantage, the practice ought to be abandoned.

The use of those large doses of iodine and its salts, which are sometimes prescribed by medical men in one form or another, has had the effect of seriously disturbing the constitution, and inducing a train of alarming symptoms more formidable than those produced by the bronchocele itself, so that females have presented themselves to us quite worn down by the long-continued and unavailing doses of this mineral.

TONSILLITIS, CYNANCHE PAROTIDEA, and GLOSSITIS are so many visible diseases from inflammatory enlargement of organs that I need not particularize them. Mention should here be made, however, of several most excellent points of practice which are pursued by the physicians in this hospital in these attacks. In the first place, whenever tonsillitis is running a severe course, the early exhibition of an emetic is usually very serviceable, at which time Dr. Hawkins is an advocate for the free use of the liq. argenti nitratis of the London Pharmacopœia; the tonsils are painted over with a camel's hair brush, and he then allows the patient to keep a lump of ice constantly in the mouth, until the subsidence of the inflammatory action renders this agent painful to the teeth, which before was so pleasant and alleviating in its effects. We lately had several instances of the value of this mode of practice in mitigating the distress which is experienced from tonsillitis. A young woman, aged twenty-five, was admitted, amongst others*, with such alarming symptoms of tonsillitis, that she could not swallow, neither could we open the mouth sufficiently wide to enable us to see the condition of the fauces. However, after some trouble on my part, and of suffering on hers, I succeeded in gagging the mouth wide open by means of a stick between the molar teeth, when I found both tonsils contiguous, and the uvula scarcely visible. I scored these glands freely with a lancet, making them bleed to the amount, perhaps, of an ounce. Yet this afforded but temporary relief, so that, at my evening visit, I found her suffering as much as she did previous to the scarification. I now had recourse to the above-mentioned plan, and painted the tonsils freely with the solution, and ordered some ice to be kept in the mouth during the night; when, to my gratification, I found the patient on the morrow's visit able to sit up in bed and take her breakfast, and swallow her medicine with comparative ease. I persisted in the plan for two or three days more, and she left the hospital before the week expired, quite convalescent. This admirable practice, I am satisfied, is more valuable than that unscientific mode of gargling the throat, so much thought of by many of the profession. We have here an inflamed set of glands, and the very muscles which must of necessity be brought into action during the use of a gargle, such as the constrictor isthmi faucium and the two constrictors of the pharynx, are thereby so impeded in their action when the tonsils are inflamed, that it is physiologically impossible for a gargle to irrigate these bodies. They

* This disease, and the other two with which it is here grouped, broke out in a severe form, as an epidemic, in the metropolis, during the spring of 1847; and I never remember to have seen so many and such acute attacks of glossitis and laryngitis as I witnessed during that year.

must, therefore, be attacked by some more available means than those of gargles, and the above plan meets these objections.

The occurrence of GLOSSITIS leading on to acute inflammation of the upper part of the pharynx and larynx has also been unusually severe and general. The patients have felt a slight sore-throat; swelling around the angles of the jaw, a swollen tongue, aphonia, difficulty in deglutition, and a sense of threatened suffocation have supervened in six or in ten hours; none of the cases have hitherto terminated fatally in this hospital. I must hasten to notice, in the first place, the very judicious practice of one physician in this formidable disease. He commences with the exhibition of one grain of tartar emetic in solution, and repeats the medicine in half-grain doses every half-hour; he covers the throat with two dozen leeches, and renews them as soon as the former ones have ceased to bleed, surrounding the whole neck, from ear to ear, with a large linseed poultice, over which is a broad layer of oil silk; this poultice is renewed every three or four hours, and the comfort which the patient experiences from it is always very decided. He is allowed to have curtains around his bed, and every means is adopted to prevent a current of cold air passing to the head of the bed. In two or three instances bleeding from the arm was resorted to, but the influence of the tartar emetic usually dispensed with this practice. The disease was much more common amongst the female than amongst the male sex, and occurred chiefly in those whose ages varied from eighteen to thirty.

In the severe form of MUMPS, great relief was experienced from a large flannel soaked in hot decoction of poppies, or equal parts of this decoction and infusion of hops, and applied to the jaw. The evaporation of its warmth was retarded by a large piece of oiled silk, or of gutta percha sheeting over the flannel. In some instances a critical otorrhœa, or maxillary abscess, or gumboil, ushered off the attack, and the patient's convalescence rapidly followed.

SCROFULA, so closely allied in its pathological characters to tubercular disease, might have been placed in the third class, but for this reason, that, in addition to the peculiarly wan countenance of a strumous individual, we usually have some external swelling to denote the glandular disease which is in progress. It has often suggested itself to my mind that the spawn or embryo of scrofula is the produce of a syphilitic taint on the one hand, and the virus of unprotected small-pox on the other. Variola was, there can be no doubt, the sore affliction with which Job was attacked, as we read, "So went Satan forth from the presence of the Lord, and smote Job with sore boils from the sole of his foot unto his crown" (Job ii. 7; Isaiah i. 6); and the description given by modern writers of this fearful malady in the East leaves no question as to its identity. The other scourge of mankind, which is the result of sin, namely, syphilis, is plainly noticed in the sacred scriptures as one of the curses which man has entailed upon himself; and, therefore, the parent stock of the disease under consideration is as ancient, I believe, as is the fall of man from his pristine state of innocence and uprightness into rebellion against God, his Creator, and into transgression against man, his neighbour*. Thus the grandsire of all evil and misery which has befallen the human race since that terrible event is Sin, which was conceived in the womb of lust, and produced her hideous progeny. Well may we, therefore, take up the words of that pious author, and exclaim,—

"O thou hideous monster, Sin,
What frightful ills hast thou brought in!
All Creation groans with thee,
Pregnant cause of misery."

Now, as these supposed fundamental diseases of scrofula, namely, variola and syphilis, are capable of transmitting their respective poisons to the fetus in utero, and that in a more pre-eminent degree than any disease with which we are acquainted, so it can be easily understood that the issue of these two diseases when combined, namely, scrofula—should be equally capable of transferring its virus to the unborn infant. Tubercular disease of the lungs and of the mesenteric glands are the common results of scrofula, and therefore, it enjoys the primeval ability in

* Let the following scriptures be read and compared together:—Leviticus vii. 21, and xv. and xxii.; Numbers v.; Job xx. 11, and xiii. 26; together with 1 Samuel xxi. 4, 5; and 2 Samuel iii. 29; when it may be readily gathered that, as whoredom is the parent of syphilis, so the one is coeval with the other.

propagating its species through the embryo. But as the copper-coloured Indian, and the tawny Chinaman, and the fair European are all the offspring of one common parent, though each one is capable of producing a progeny exactly similar to its mother, so is it also with variola, syphilis, scrofula, phthisis, podagra, mania, &c. &c.; the father taints the child, and the children infect their offspring from generation to generation; and thus it will continue until time shall be no more, and death, disease, and mortality are swallowed up in eternity.

The physiognomy of scrofula is not less marked than are the features of a tubercular diathesis. There is a particular formation of the body which is common to both of these sister diseases: a long neck, with prominent shoulders, and a narrow, conical, or "pigeon-breasted" chest; a delicate, clear, and soft skin; a fine, well-arranged set of teeth, rarely surcharged with tartar, and presenting an unusual degree of whiteness; fair hair, a delicate rosy complexion, large blue or black eyes, a thickness in the upper lip, an effeminate voice, with prominent veins on the surface of the body. Such individuals are usually possessed with no small share of beauty, and are particularly liable to repeated attacks of tonsillitis, bronchitis, diarrhoea, and such-like disorders of the mucous membranes. I am acquainted with three gentlemen at present, who answer to the above description in a striking manner, and they are the subjects of severe attacks of inflamed tonsils, so that active treatment has been imperatively called for in the early stages of the disease, and change of air has appeared to be the only means of inducing a perfect convalescence.

But there is a form of sub-acute tonsillitis, accompanied with more or less hypertrophy of these glands, which is constantly occurring in females who are the subjects of severe leucorrhœa, and who are of a delicate habit, and confined in a close, hot, and moist atmosphere. In such cases the attention of the medical man to the cure of the leucorrhœa is of equal importance to the treatment of the cynanche. The latter disease has oftentimes subsided when the patient has become convalescent.

CLASS V.

Division II. *Enlargement of Organs, Glands, &c.; Countenance careworn.*

From Dropsy.

„ general.
 „ peritoneal.
 „ ovarian.
 „ mesenteric.
 „ hepatic.
 „ cardiac.
 „ splenic.

Tympanitis

Tumours.

From Tumours uterine.

„ ovarian.
 „ cystic.
 „ hepatic.
 „ splenic.
 „ aneurismal.

Acute rheumatism.

„ synovial and
 „ fibrous.

Let me now return to the general subject of DROPSY; and in the first place I may notice that dropsy, in its general acceptation, is not a disease, but only a symptom of one, in the same manner that redness, swelling, and heat of the skin are the several symptoms of inflammation of the skin itself. In the present day, when pathological anatomy, and chemical investigations into the composition of morbid fluids, have afforded so much instruction to the physician, the nosologist may not define dropsy as an idiopathic disease. Some organ, or a set of organs, becomes deranged in its functions; secretion and absorption are no longer duly balanced throughout the system, and an accumulation of serous fluid, exhaled from the capillaries, is the result. When this effusion takes place from the capillaries throughout the adipose cells of the whole body, it is known as ANASARCA. When the cells themselves are not broken down or ruptured by the distended fluid, the anasarca is brawny, hard, and tense; but, when the accumulated fluid has destroyed the cellular form of the adipose tissue, the anasarca is then soft, doughy, pitting, and the skin is shining and glazed. The first-mentioned species of anasarca occurs in robust, strong, and plethoric individuals, who labour under no organic

disease of the body, and it is the only form of dropsy which really deserves the title of an idiopathic disease, since the precise nature of that disease is not yet satisfactorily elucidated by pathological writers. The second species is almost invariably connected with some morbid changes of structure, and diseased action in the viscera of the body. When dropsy first evidences itself in the legs and ankles, it is usually *CARDIAC* in its origin; but when it also shows itself in the face and eyelids, in addition to the extremities, it is *RENAL*; whilst, on the other hand, if it makes its first invasion in the abdomen, it is commonly *HEPATIC* in its origin; and valvular cardiac disease, with dilatation of the cavities and thinness of the walls of this viscus, betrays itself in an early effusion into the pleural sacs, constituting dropsy of the pleuræ, or *HYDROTHORAX*. When an ovum has escaped from its vesicle, and when, instead of passing along the Fallopian tubes into the uterus, it has remained in the body of the ovarium, distended the gland with its peritoneal covering, and has caused inflammation to be set up in its neighbourhood, the origin of *OVARIAN* dropsy is at once established. If the mesenteric glands are the seat of scrofulous disease and enlargement, the obstruction which they offer to the circulation, the deficient absorption and nutrition which attends their increase, give rise to *MESENTERIC* dropsy; whilst the results of peritonitis, by forming adhesions between this serous covering and the intestines, depriving the latter of that peristaltic motion so indispensably necessary to the healthy action of the alimentary canal, causes *PERITONEAL* dropsy. Repeated attacks of ague usually leave some morbid changes in the character of the spleen, whereby the portal blood becomes diseased, the liver deranged, the constitution enfeebled, and *SPLENIC DROPSY* is the result.

But, as it happens in the vegetable world, that if there is too much moisture on the earth and no sun to vivify the soil and the plants, or, on the other hand, if there is a long drought, and the continued rays of a vertical sun, vegetation under neither of these circumstances flourishes, so, in like manner, if derangement of one organ in the animal frame arises, disorder soon pervades the whole body. Barrenness of land, from whatever cause it may arise, is quite as much from the hand of God as is barrenness of the womb, or sickness, or death*.

We therefore find that, whenever any one organ which is essential to life becomes diseased in its structure, or deranged in its functions, other organs, sooner or later, are involved in the general disturbance. It rarely happens, therefore, that dropsy, in the abstract sense, continues for any period to present itself as symptomatic of structural disease in one organ only. If the origin of this derangement should spring from cardiac disease, the undue circulation of blood and the delay of its smaller columns through the hepatic system will induce diseased liver, and this change may sooner or later bring on splenic and renal disease. Thus it is that a dropsical patient will oftentimes inform us that "Dr. So-and-So told him that his liver was affected, whilst Mr. So-and-So declared that he had got some complaint in his heart; but his own family doctor, who brought all his children into the world, was quite sure that his complaint lay in his kidneys!" Now, peradventure, on examination of our patient we shall be satisfied that one and all of the three gentlemen are correct in their diagnosis. The patient, it may be, originally suffered from an acute attack of albuminous urine; this morbid condition of the system induced vitiated blood, cardiac disease, and hepatic derangement; from all of which causes dropsy supervened; so that, if the physician is acute in his judgment, discriminating in his investigations, and cautious in the formation of his diagnosis, he may generally ascertain which was the offending organ in the first instance, and how far disease has made its ravages in this one, and in other organs that have been subsequently involved in the constitutional disturbance.

I will first notice "*IDIOPATHIC DROPSY*." This unusual form of disease is more prevalent amongst the robust, hardy, agricultural labourers, than it is amongst the mechanics and artisans of large towns. The subjects of it usually possess a strong bony frame, firm and powerful muscles, a due share of subcutaneous fat, and who live freely upon animal food and malt liquor. I cannot say that I have seen a score of such cases during the last twenty years; but, whenever they have presented themselves, the following characteristic features have been observed:—The countenance is bloated, but ruddy and healthy in colour; the legs, thighs, and arms are swollen, and hard, and give the sensation of handling a swine's back; the pulse is full and strong; the skin hot and tense; the tongue is furred; the appetite not much impaired; the urine is scanty, high-coloured, depositing a copious brickdust sediment, acid,

* "He turneth a fruitful land into barrenness."—Psalm cvii. "Behold, now, thou art barren, and bearest not," &c.—Judges xiii.

and contains no albumen; the bowels are costive; the nights are passed in a restless, unrefreshing manner; and the patient finds that the shortness of breath which is creeping upon him wholly incapacitates him for further work.

The effusion, in such instances, is probably the result of some alteration in the chemical qualities of the fluids in the system. A suppression of any vicarious discharge, as from hæmorrhoids, the catamenia in females, perspiration, &c., will induce such a disease; but the most common cause is gluttonous indulgence, a plethoric condition of the system is induced, which relieves itself by effusion from the capillaries of the body into the cells of the cellular membrane.

The treatment in such cases is, in the first place, to relieve the general circulation by one or more bleedings from the arm; active purgation with calomel, colocynth, and saline purgatives should follow this depletion, with the alkaline diuretics, and a spare and not too highly azotized diet.

Where this plethoric state has continued for some time, it not unfrequently happens that cardiac disease becomes established in the form of hypertrophy of its muscular walls. If, however, the latter disease is not much advanced, and valvular obstruction does not exist, the exhibition of elaterium in this form of dropsy is unquestionably of great service. With this exception, I have rarely observed a decided benefit from the use of elaterium in any form of dropsy but in that of "renal or albuminous dropsy." The following instance of "*brawny dropsy*" may illustrate the preceding remarks. John Magrath, aged thirty-five, Irish labourer at Covent Garden Market. Face, chest, and legs swollen to such an extent that, as he lay in bed, he occupied nearly a square surface. His appearance resembled the portrait of the celebrated fat man, Daniel Lambert. His legs were of a boardy hardness, and mottled with blebs and dark meandering veins, approaching in character to elephantiasis. His abdomen was much swollen, but did not fluctuate. His breathing, in the earlier stages, was not much distressed, nor did he require a high posture in bed, but he lay for some weeks in the recumbent position. He stated that his urine had been very thick and high-coloured, but had lately become quite clear and pale. There was no evidence by auscultation of cardiac disease, and only slight emphysema of the lower lobes of the lungs. His appetite was bad, and he acknowledged that he had been a spirit-drinker. He never had had acute rheumatism, nor any previous attack of dropsy. The urine never exhibited any traces of albumen. His illness commenced a few weeks before his admission, and was dated from getting wet through in the market, whilst standing amongst the wet filth of the refuse vegetables. His legs first swelled, and then the thighs, and latterly the chest and face, &c. This poor fellow continued to get worse, notwithstanding the active treatment adopted, and he increased to such an incredible size, that I much regret that the dimensions of his body were not taken, or a drawing made of his extraordinary appearance, as I am persuaded it was the most aggravated form of this disease. The peculiar brawny hardness remained until a week before his death, when the vessels in the toes, ankles, and hands relieved themselves of much watery fluid, and their surfaces freely pitted on pressure; with this exception, no indentation by the finger on the skin could be made throughout the progress of the case; and this surface was as tense and as hard as a pig's back. He at length sunk from dropsy of both lungs and pleuræ. We could not obtain permission to make a *post-mortem* examination*. I may also mention that a similar case occurred here in 1833, in a female aged eighteen. The thighs measured thirty-three inches in girth, and were equally as hard and brawn-like as the preceding instance. She presented such a spectacle, that many medical gentlemen visited her, and were astonished at the features of the case.

When the peritoneal covering of the intestinal canal, or that portion of it which is reflected over the surface of the liver or of the spleen, is the seat of acute inflammation, the result of such morbid action will be thickening of that membrane, with more or less adhesion of its surface to the continuous layer of the peritoneum which forms the inner covering of the abdominal walls. Organization of that lymph, which is deposited by inflammation upon a serous membrane, is the immediate cause of such thickening and adhesion. Whenever this process is fully completed in the serous covering of the heart, and chronic pericarditis is established, the effect of such adhesion is sooner or later manifest in the disturbed action of the organ itself. That free undulation, natural play, and equal contraction of the various chambers of this viscus are now gradually but progressively altered; its movements from the apex to the base are fettered, its free distension impeded, and its due contraction prevented; and it is, therefore, no matter

* As I have before remarked, the kidneys, in such cases, are surcharged with masses of hypertrophied fat, and their tubular structure blocked up with crystals of elaine.—"Treatise on the Kidney," 1839.

of surprise to find its action irregular, its impulse violent, and its sound increased, when its investing sac, in lieu of affording it moisture, freedom, and support, has now clogged its movements by the bands which it has thrown around it. These may be considered, then, as the primary results of such an inflammatory attack upon the pericardium; they, however, soon give rise to other equally serious effects upon the parts immediately around this vital engine. Those large venous sinuses, the auricles, together with the main vessels which disgorge their contents into these cavities, become dilated; column after column descends into them, but they no longer find that easy ingress and egress through these chambers which health and vigour once afforded. The principal trunks of the organ now become gorged by the delay in the progress of the blood through the respiratory system. Distension of the jugulars, congestion of the pulmonary capillaries, and an increasing distress about the action of the heart are the disturbed movements which spring from an adherent pericardium; whilst, on the other hand, the hepatic venous engorgement which ensues from the same cause exercises its baneful influence over the abdominal circulation, and the secretions of the several organs contained in that cavity.

It is an invariable law in pathology that, whenever obstruction to the course of any fluid occurs, the pent-up fluid must find an exit in some part of the body. That portion of the circulating fluids which is thinnest, and most capable, therefore, of escaping from its vessels, finds the readiest egress. Serum, in one form or another, then escapes into circumscribed as well as into uncircumscribed cavities. Hence we soon find the disease in question has induced ascites, or hydrothorax, in addition to the varied changes noticed above. Now, if these observations are applied to the results of *acute peritonitis*, we shall understand why dropsical effusion is so constantly the effect of agglutination of the intestines to the peritoneal walls of the abdomen. The same laws in pathology which act so as to give rise to hydrothorax in pericardiac adhesion also act so as to induce ascites when adhesion of the peritoneal sac exists. The vermicular motion of the intestinal tube, by which it contracts and propels its contents, is now suspended: the gradual flow of bile from the common hepatic duct into the upper portion of the alimentary canal, so essential in the processes of nutrition and of fæcification, is now impeded in its progress; the chief stimulus to the peristaltic action of the intestine is the flow of bile into them, and any deficiency in this latter action is always attended with a retarded flow of bile into the canal itself. But the hepatic lobules are, moreover, gorged by this delay in the progress of the bile which chronic peritonitis induces, and thus the liver and spleen soon become altered in structure. When the abdomen is thus the seat of serous effusion, it usually follows that the firm bands which unite the layers of the peritoneum together prevent any large amount of effused fluid taking place; and the true character of ascites is not so commonly observed in this chronic disease as it is in that of hepatic dropsy, which shall shortly be noticed.

ASCITES.—PERICARDIUM ADHERENT.

Mary Oliver, aged forty-five, married, and has had six children, admitted November 13. Skin dingy and opaque; countenance and body emaciated; swelling of legs, thighs, and abdomen, with distinct fluctuation; pain at the epigastrium aggravated by eating; dyspnœa; slight cough; palpitation; lies easiest on the *left* side; cannot lie on the back for pain in the abdomen; urine scanty, clear, pale, but contains no albumen. Never had rheumatic fever. Ascribes her illness to over-fatigue, and states that seven months ago her legs and thighs began to swell, and crept up to the abdomen, which swelled three months ago. Percussion over the abdomen evidences ascites, as the sound is clear on the front, but dull over the flanks. The whole venous system is singularly congested, especially the jugulars, and the veins on the chest. Pulse occasionally intermits. As diuretics proved unavailing, she was tapped on the 24th of December, when eighteen pints of clear serum were drawn off. But she never rallied from the operation, and gradually sunk, and died on the 3rd of January. The liver was found to be harder and its edges rounder than natural. The gall-bladder contained eight small, angular, black calculi, friable, and breaking with a crystalline surface, and affording a yellow colour when mixed with water. The spleen was larger than natural, and its peritoneal covering thick, white, and opaque. The kidneys had undergone the earliest stage of Bright's disease. The pericardium was universally adherent to the heart, which organ was rather large, the increase belonging almost entirely to the auricles, both of which were large. No valvular disease, and no apparent alteration in the internal lining.

The researches of Bischoff, Raciborsky, Pouchet, and Girdwood, &c., on the extrusion of ova in oviparous animals, and on the periodical maturation of ova in mammalia, especially in the human subject, have elucidated a fact which explains satisfactorily the pathology of OVARIAN DROPSY. These physiologists remark that, inasmuch as an ovum may descend the oviduct, and be laid, and that the spawn of fishes may be cast by the female, and that in both instances the male is in no wise concerned in this process, as we constantly see in the case of a domestic hen or canary bird (for these animals continue to lay wind-eggs for months or years together apart from any cock bird); so also there are stated menstrual periods in the life of all adult women, at which an ovulum bursts from its vesicle, and descends through the Fallopian duct into the uterus, and is carried away by the uterine discharge. The process occurs, according to these authors, at the catamenial period, so that this circumstance will readily explain the hitherto perplexing fact, that true corpora lutea are repeatedly met with in unimpregnated females*. If, therefore, such views are correct—and observations in health, in sickness, and after death fully corroborate them—it serves to explain the frequent occurrence of ovarian disease, or dropsy, in barren women. From my own observations, I am led to think that ovarian dropsy usually proceeds from partial or complete obstruction of one of the Fallopian tubes, which impedes the escape of an ovulum from its vesicle into the uterus; or it may originate from a feeble state of its fimbria, whereby the grasp is not vigorous enough to propel the ovule out of its capsule into the tube: inflammation supervenes, which is continued into the sac; serous distension of this sac follows, and an indurated ovarium with a dropsical sac attached to it is the morbid product. I once attended a patient, aged thirty-four, with her second child; she was attacked with puerperal fever, and died on the seventh day. This strong and healthy woman had been married ten years, and had never been pregnant until the eighth year after her marriage, when she gave birth to her first child. I found the left Fallopian tube quite impervious, with an ovary smaller than its fellow, while the right ovary was healthier and larger, and contained one recent corpus luteum, and its tube also was pervious throughout its whole course. Whenever an ovulum has thus burst from its vesicle, and has met with any obstacle in its descent into the uterine cavity, its detention in the Fallopian tube will necessarily give rise to a morbid action in the vesicle itself, and in its surrounding fimbriae. Enlargement of the ovarium ensues, the surrounding pressure causes inflammation, serum is poured out into the emptied vesicle, which increases until the patient is sensible of an enlargement over or above Poupart's ligament. I would here observe, that, if any real benefit is likely to be afforded to such a patient, the adoption of early local depletion is of the greatest importance. Absolute rest in the recumbent posture must be strictly enjoined for many weeks. Six or eight leeches should be applied to the surface of the swelling, and they should be repeated every day, or at furthest every other day, for one or two weeks; the orifices should be covered with a thin layer of bread poultice, and oiled silk; the bowels kept moderately acted upon by purgative salines, and the kidneys gently stimulated by the alkaline diuretic; and the patient should be placed in a hip-bath every morning during ten or fifteen minutes. It is very doubtful to my mind whether mercury exercises any control over such a disease, while the character of the organ and the nature of the disease do not warrant us to anticipate that much relief should be derived from this agent, as is the case with other forms of inflammation. Since, therefore, this enlargement is usually met with in those women who have previously suffered from a debilitating leucorrhœa, or from menorrhagia, it would be far preferable to employ mercury only as an occasional stimulant to the liver and its secretion, rather than lower the individual still farther by risking an injurious and distressing salivation. I have witnessed much benefit follow the employment of the tartar emetic ointment over the organ, after the inflammation had been subdued by leeching, &c. It happens frequently, at this stage of the disease, when inflammatory action is going on in and around the ovarium, that the bladder is unable to expel its contents, and the mucous surface, according to the side of the

* Bischoff's words are the following:—"In the human female, during the period in which she is capable of child-bearing, there occurs every four weeks a maturation and extrusion of an ovum from the ovary, which process is accompanied by a simultaneous secretion of blood from the uterus. This periodical maturation of an ovum is the first and most essential condition to conception and pregnancy. At this period only will coitus be followed by conception; at all other times the latter will be impossible." ("Essay on the Periodical Maturation and Extrusion of Ova." Translated by H. Smith, Esq.) Sterility in married women frequently arises from menorrhœal as well as from dysmenorrhœal states of the uterus; hence debility of the Fallopian fimbriae ensues, and a vigorous ovum is not evolved. I have noticed similar results in the common hen; they will lay eggs daily, whilst fed at regular hours and kept with wholesome food; but if they are suddenly deprived of grain, and allowed much wet food, they have fluxes, and the eggs are fewer, not averaging more than two or three per week.

disease, either of the cœcum or of the rectum, and where the latter passes over the brim of the pelvis, becomes inflamed, diarrhœa supervenes, the tongue exhibits a glazed, raw, and dry surface, the skin is hot, and intestinal fever is established. In such cases, powdered opium* in four oz. of starch, as an enema, together with small doses of our compound grey powder† with opium, twice or three times a day, have proved of great value.

When, however, the sac has continued to fill, in spite of all our remedial agents, and ovarian dropsy has become fully established, there are no reasons why we should not be able, for the most part, to decide between the existence of this disease and that of ascites. By attending to a few principles, the difference can be ordinarily made out. For instance, if the percussion over the tumour is dull, but is clear at the flanks; if, also, the dulness in front increases towards one of the iliac regions; and if the patient is made to turn on her side, and the flank on which she now lies emits a duller, in lieu of a clearer sound, while the percussion over the exposed flank is yet clearer; if, also, the fluctuation is more perceptible in front of the abdomen, and gradually becomes less marked towards the spine,—then we may assert with confidence that the swelling is from ovarian dropsy; for the very reverse of all these phenomena occur in ascites. The explanation of these facts will readily present itself to an observing mind. It may, however, be remarked, that the thickness of the walls of an ovarian sac; its floating over and upon the intestines; its free motion from side to side; and the enlarged body of the ovarium itself; are so many pathological reasons why the above principles afford such assistance in the formation of a just diagnosis. I once knew an instance where the surgeon plunged a trocar into the linea alba, under the false notion that he was tapping for ascites, when nothing flowed; he withdrew the instrument, and again thrust it into the linea semilunaris on the left side, and emptied an ovarian sac of several quarts of fluid. If the above precautions had been attended to prior to the operation, the sad blunder would certainly have been prevented.

OVARIAN DROPSY.—EXTENSIVE ULCERATION OF THE STOMACH.

Louisa Ann Alder, aged fifty-five, unmarried. The subject of ovarian dropsy; has for the last ten years been an occasional patient at the hospital, for the purpose of being tapped. During this period it has been performed twenty-nine times, at intervals, first, of twelve months, but latterly of six weeks only, the quantity of fluid being generally three gallons. Admitted for the last time on Nov. 28; was tapped on Dec. 10, but only half of the usual quantity was drawn off, the canula becoming obstructed by shreds of lymph; the fluid was darker in colour and more turbid than before. After a month the operation was repeated, when a considerable quantity of lymph, in flakes, obstructed the escape of the fluid. After a day or two, renewed symptoms of inflammation of the cyst came on, great depression of the vital powers, tenderness of the abdomen, with pain, vomiting, heat of skin, a quick, irritable pulse, thirst, and slight constipation. Leeches were applied to the abdomen, and a blister; some mild purgatives were given. After a few days the inflammatory symptoms subsided, and she seemed to rally, but never regained her vigour, and, gradually sinking, she died on the 20th of February, about four weeks after the last tapping.

On examination, seventeen hours after death, a large globular cyst was found distending the cavity of the abdomen, adherent to the peritoneum on the right side, and at its upper portion, the posterior part of the stomach was also adherent to it. It seemed to have its origin in the left ovary, the healthy structure of which was entirely lost; the uterus and the right ovary were natural. It contained a considerable quantity of air, and more than a gallon of whey-like, purulent fluid; it was lined by a thick and ragged layer of lymph, evidently recent, and beneath which were several other layers much firmer; these were thickest at the anterior part of the cyst. The interior of the stomach presented numerous ulcerations, two of the extent of half-a-crown, with four or five smaller ones; irregular in form, their edges rounded, smooth, and quite pale; their bases, which were also pale and smooth, were in the

* The powder is far better than laudanum in such cases, as well as in retention of urine, diseased prostate, inflamed bladder, or stricture, &c. in the male; for it is usual to find the rectum so irritable in these instances that the bowel cannot retain the fluid upwards of five minutes, and it is expelled, before the laudanum has exerted any influence; whereas, when the opium in powder is suspended in the starch, although the latter may be passed away, yet the former will lodge in the folds of the bowel, and continue to exert its soothing effect for many hours afterwards. Hence it is that we have retained our form of *Enema Pulv. Opii* in preference to the *Enema Tre. Opii* of the London Pharmacopœia.

† This valuable combination is thus made:—℞. Hydrarg. c creta ij. gr.; sodæ sesq.-carb.; pulv. cretæ comp. aa gr. iv. ft. pulv.

greater part formed by the thickened peritoneum; and in one of the larger ulcers, situated in the posterior wall, the ulceration had, in two points, passed through the coats of the stomach; and in one of these points it had reached the omentum, which adhered to it, and in the other the ovarian cyst. The posterior part of the right lung was congested, and adhered very firmly to the corresponding wall of the thorax; the bronchial membrane was red; the kidneys small; the pelvis and the upper part of the ureter of the right one very much dilated; the spleen small; the other organs healthy.

I shall now proceed to notice those enlargements of organs and tumours on the surface of the body, which are oftentimes the source of much perplexity to the medical man. One of the main causes of this difficulty is, as I have endeavoured to exemplify throughout these papers, the assimilation which one disease presents to another, and the close alliance which a trifling one bears to another of a mortal character. What medical man is there, who, after a long professional career, does not occasionally find himself unable to decide whether a female, presenting herself with a large, solid, oviform abdominal tumour, is carrying a gravid uterus, or is the subject of chronic enlargement of the ovarium? I know of two instances in the country where the patients were tapped for supposed dropsy, and the *post-mortem* examinations brought to light the melancholy but appalling fact, that the patients were both of them advanced in pregnancy. *TYMPANITIS*, or *METEORISMUS*, is one of those deceitful enlargements of the body which has been repeatedly mistaken for dropsy or for pregnancy. Some time ago I was requested by the house-surgeon to accompany him into the surgical wards, in order to give my opinion upon the nature of an abdominal tumour in a young unmarried female, just sent up from Kent to the hospital. The gentleman in question had judiciously observed the most rigid silence about the case until we arrived at the bedside, when I found a healthy, plump, and rather handsome young woman, with an abdomen as tense, as firm, and as solid to the touch as a woman in her ninth month of pregnancy. As I laid my hand over this enormous tumour, he whispered across to me, "*Est-elle gravide?*" I confess, I was startled, too, at the same suspicion, but I paused for a moment, and by percussion and by firm manipulation I soon satisfied myself that it was no real tumour at all; for the sound elicited was clear in every part, and, as I have generally noticed in such cases, the tumour was entirely dispersed by grasping the abdominal parietes, and kneading, as it were, the intestines from side to side, so that in a few minutes, to the surprise of us all, the abdomen was as flat as in a woman after childbirth. We placed a firm bandage over the abdomen, but, in spite of this, it was as large in three days as usual. We now took charge of her in the medical wards, and although she was put under a course of aloetic purgatives, with shower-baths, exercise in the garden, and a firm band was worn around the loins, and although in the space of six weeks it was somewhat reduced, yet she returned to the country with a more prominent abdomen than most females possess at her age; however, we had the satisfaction of being enabled to speak positively of its innocent nature, and, moreover, that it was not a gravid uterus. I have seen repeated instances of this most obstinate form of tympanitis yield to no treatment whatsoever, but the women have married, borne children, and they have never afterwards been troubled with the complaint. Another singular instance of false diagnosis, under similar circumstances, occurs to my mind, which is of recent date. An unmarried woman, aged 28, in respectable circumstances in life, was sent to the Middlesex Hospital from the extreme part of the north of England (Cumberland), in order that she might undergo the operation of ovariectomy. The patient in question had been treated during nine months for diseased ovarium, and, as all remedies had failed to reduce the swelling, her medical attendant was desirous that the question of the operation should be entered into, to which the patient willingly consented. The woman was carefully examined by us, when we were satisfied that there was no tumour beyond what a mass of supposed impacted fæces in the cæcum and colon produced; the patient was accordingly put under a course of smart purgatives, enemata, and at length steel, shower-baths, &c., when a complete dispersion of the tumour ensued in the form of a huge and dense mass of scybala and fetid evacuations, and she returned home perfectly cured of her abdominal tumour, and not a little astonished at the pleasing result of the treatment she had received from her "London doctors." A case very analogous to the above occurred in the hospital during the late Dr. Sweatman's time. The patient was admitted under Dr. Wilson, in consequence of a tumour occupying the right iliac fossa; it had been noticed a few days after her confinement, which took place two months prior to her admission. The latter gentleman had some doubts whether it was ovarian in its nature or not, and therefore sought the advice of the physician-

accoucheur. Dr. S. pronounced it to be acute inflammation of the ovary, and applied leeches and fomentations, whilst he administered calomel and opium internally, so that ptyalism was induced. These remedies failing to reduce the tumour, Dr. Wilson resolved on abandoning them, and resorted at once to a course of purgation, with copious emollient enemata every night. In a few days the patient got rid of a large quantity of pultaceous faecal matter, and, as she did so, the tumour proportionably diminished in size, and after a fortnight's further perseverance in the same treatment it was completely dispersed*.

I can look back with some surprise at the numerous cases of abdominal tumours which I have witnessed in this hospital, that have been entirely mistaken in their character by those practitioners who have sent them to us; and the perplexity of diagnosis has oftentimes been somewhat increased by the singular history which the patient has given us of its rise and progress. I need not add, that the instances are by no means few, also, in which unmarried females have gained admission into the hospital for a supposed dropsy, which, on examination by percussion and auscultation alone, have satisfied us that a foetal heart was duly performing its functions within; and they have been dismissed accordingly, or have been recommended for admission into some lying-in charity†. We find it best to make them or their parents acquainted with our suspicions in such doubtful kinds of tumours; and, if it does not prove to be pregnancy, there is, I imagine, no harm done, and the medical man of an hospital is not likely to be browbeaten by the insolence of the parties concerned‡.

But the most extraordinary case of difficulty in diagnosis, as it appeared, occurred recently in the medical wards. The tumour, which, as it will be seen, was perfectly harmless, had been regarded by a general practitioner as arising from dropsy of the abdomen, the result of general debility of the system consequent upon a diseased state of the spinal chord, and was treated with tonics, stimulants, and a full diet of nutritious food. But I will briefly relate the circumstances.

PARAPLEGIA FROM PARTIAL OBLITERATION OF THE SPINAL CHORD, THE RESULT OF AN HYDATID TUMOUR IN IT.

An unmarried female, aged forty, was admitted in June, presenting the following symptoms:—Countenance thin, wan, and sunken, expressive of a lingering but painless disease; features sharp, but dull; perfect paraplegia of the lower extremities; respirations wholly thoracic; loss of sensation as high as the eleventh dorsal vertebra; stillicidium urinæ, fetid, and ammoniacal; excoriations around the pubes; alvine evacuations pass involuntarily. On laying her down in bed, a large tumid abdomen was noticed, the size of a seventh or eighth month gravid uterus. I believe I detected a distinct fluctuation over this tumour; yet, notwithstanding this, I interrogated the mother, who was present, as to the probability of her being pregnant, when she looked astonished at the question, and exclaimed, "Oh, dear me, sir, that is the dropsy for which she has been treated, and it goes on increasing on account of her extreme weakness!" The history was the following:—The paraplegia had been slowing creeping on during the last six months; but for two months past the abdomen had swelled, and she had passed but little water, except that which dribbled away. I immediately suspected that this tumour was a distended bladder, and requested the attendance of the house-surgeon, who passed a catheter, and drew off the unusual amount of five pints and a half of high-coloured, fetid, and alkaline urine. The abdomen was now perfectly flat. The following day, in consequence of a brisk purgative which she had taken, and which had acted smartly on the bowels, it was not considered neces-

* It is extraordinary to see the immense size to which the colon will attain in those individuals who pass many days or weeks without ever voiding a copious alvine evacuation. There is an inflated and dried colon in St. Bartholomew's Hospital museum taken from a man who only passed one evacuation in six weeks, and the diameter of this canal is immense, and has the appearance of a ship's wind tunnel.

† A vicious and abandoned woman once gained admission for a "tumour in the bowels," as she termed it, but she was shortly discharged under the suspicion of pregnancy, when she presented herself at the dispensary window a few months afterwards, and exclaimed, before a crowd of out-patients, "Here's my tumour in the belly," holding up in her arms an infant a few weeks old, "which you doctors could not cure." She had not been informed of our suspicions, but was allowed to go quietly away.

‡ The physiognomy of a pregnant woman, and the voice, are striking peculiarities in the process of utero-gestation, and may be the means of detecting a gravid uterus, when the ordinary physical signs are perplexing or contradictory. The nose in such instances becomes sharper as she approaches towards the ninth month of gestation; there is a slight hollowness around the bases of the nostrils, caused by the action of the depressor alae nasi; and the features generally become more pointed, whilst the voice is less acute, more sonorous, and masculine.

sary to employ the catheter before the evening, but this gentleman then drew off five pints of urine possessing the same characters as before. There was no farther stillicidium urinæ, as the catheter was used twice a day. I must here remark that, in the course of ten days after her admission, the house-surgeon showed me the silver catheter, which was quite spoiled by the chemical action of the ammoniacal urine upon it*.

With respect to the treatment of this case, it may be observed, that it consisted in local blood-letting from the surface of the lower dorsal vertebræ; blue pill, so as to produce slight ptyalism; and occasional purgation, to remove the intestinal collection of fecal matter; the nitro-hydrochloric acid, with henbane in the dec. uvæ ursi, was administered three times a day. Little benefit ensued from this treatment, when she was ordered the tr. cantharidis internally, which gave some little relief. But a rapid and frightful slough soon formed over the sacrum and nates, and, although she was lying on a rheioline †, and every precaution was taken to prevent its further progress, yet it soon came away, leaving the sacral bones exposed to a great extent of surface. She now became delirious and insensible, and sunk under this additional source of exhaustion, three weeks from the day of her admission.

The *post-mortem* examination exhibited an hydatid tumour, the size of a small cocoa-nut, occupying the situation of the four last dorsal vertebræ. The bodies of these bones were quite destroyed by caries; the tumour had made its way into the cavity of the abdomen, and was seen from it, covered by the mesentery. There was a small hydatid tumour in the liver also; the kidneys were highly vascular, and purulent matter filled the various calyces of these organs; the pelvic viscera were healthy; there was no fluid in the peritoneum whatever.

As soon as the above case proved the fallacy of the previous diagnosis, I was strongly reminded of an instance which occurred in Dr. Watson's practice some years ago. It was that of a Frenchman, who was sent to the hospital by his medical attendant, labouring under ascites, as he believed. But the above gentleman, shrewdly suspecting that it was a distended bladder from the very slight sense of fluctuation which he ascertained to exist over the pubes, sent for the surgeon, who, with much difficulty, got through an old stricture, and introduced a catheter, when five pints of urine were drawn off, and of course all "dropsical swelling" disappeared, and remained absent so long as the bladder was kept empty.

I will now advert rather more in detail to the various derangements, symptoms, and assimilation of symptoms, which show themselves in DISEASES or in DISORDERS OF THE LIVER. But, before we pass on to this subject, it will be useful to draw some attention to the minute structure of this gland, and the intimate relations which it bears to the abdomen on the one hand, and to the thorax on the other.

It strikes me that this structure, I mean the anatomy of the lobules, may be illustrated in the following manner:—Let a row of peas be placed upon the forefinger; transfix each pea with a black pin into the finger, then surround each pea with a yellow, a scarlet, and a blue thread, inclosing the threads with a very delicate piece of lace or muslin; and you have a representation of the structure of the hepatic lobules. The peas exhibit the lobules lying upon the finger, or sub-lobular hepatic veins; the black pins denote the lobular hepatic veins, emptying themselves into the former veins; whilst the threads respectively set forth the biliary ducts, hepatic artery, and portal vein, inclosed in the reticulated capsule of Glysson.

To carry on the similitude one step further, we will suppose that innumerable offsets are seen from the threads that surround the peas, and that these plunge into the bodies of the peas, and there anastomose and mingle together. The scarlet and the blue are noticed to verge towards the centre of the pea, or the black pin, whilst the numerous meshes that the yellow and the blue threads form seem to compose the bulk of the pea. This representation, then, sets forth the anatomical fact, that the hepatic artery, after nourishing the lobule, enters into the lobular plexus of portal veins; whilst the portal vein, after anastomosing with the capillaries of the biliary ducts, is lost in the central, lobular, or hepatic vein. This is the hepatic termination of the portal vein; but where is its trunk? and where is its origin? There is no other vessel in the human body made up like this. It represents a double fan. Its trunk

* This peculiar iridescent appearance was observed by Mr. Battley, a former house-surgeon, to be always a fatal symptom, and since that gentleman's official career in this institution the fact has been proved on several occasions.

† "The rheioline," or spring-bedstead, with horsehair mattress, is an invention of Mr. Cottam, in Oxford-street, and is found to be far more advantageous in checking the process of sloughing in bedridden patients than is the hydrostatic bed. In one instance especially, that of a lad with diseased hip-joint and destruction of the acetabulum, the patient rallied in a striking manner after he was taken from the latter bed and placed on the rheioline, and he expressed himself as being much more comfortable and in less distress than he had been upon the floating bed.

is in its centre, and its two arms or extremities are spread over two series of viscera. There is an hepatic arm which secretes bile, and there is an intestinal arm which absorbs the elements of bile. The hepatic lobules and the intestinal follicles are the ultimate terminations of this singular vessel. The radii of a circle and a central stem represent this anatomical structure exactly*.

It can be very readily understood, that since the large hepatic veins are so immediately adjoining the right side of the heart, and the current of venous blood from the liver is so direct in its course to the heart, that any deviation of structure in the latter organ—such as dilatation of its cavities, thickening of its walls, or stiffening and irregularity of its valves—will throw the venous hepatic system more or less into disorder. The first effect of such irregularity is, doubtless, congestion,—in other words, a delay of the blood in its course from the liver to the heart. How does this affect the former viscus? Surely, the delay will, if not speedily removed, give rise to a further sluggishness in the circulation of the lobular venous plexus; these tortuous little meshes thus remain permanently swelled, that is, they are never fairly emptied of their contents, because of the delay higher up. Well, then, as soon as this lobular congestion is established, I cannot see how we are to expect that the liver should perform all its important functions in due order. The biliary ducts intimately anastomose with this lobular plexus, and therefore we need not wonder that bile flows torpidly, that the bowels are costive, the appetite capricious, the rest disturbed, the heart intermitting, the mental and bodily powers depressed, and the urine highly loaded, so as to be known as “hepatic urine.” This state of things has been allowed to go on, in the large mass of those patients who are the applicants for admission here, and no advice was sought for; employment and wages are to them most essential requisites, and, if they can only work off their unpleasant sensations, they hope that all may be well yet. They have recourse to ardent spirits and such-like imprudent measures for dyspeptic symptoms as they arise. Whereas, in private life and amongst the better classes of society, this uneasiness, perhaps, would soon call forth the attendance of the medical man, when, if he judiciously administered a sharp dose of calomel and a saline purgative, the untoward symptoms would cease.

If we study the intimate relation that exists between the right side of the heart and the hepatic-portal system, we cannot be surprised at the ready manner in which these two organs, when deranged, will influence each other. The communication between the hepatic veins and the *venæ portæ* is so free, that it was considered more immediate than that which exists between arteries and veins in other parts of the body, until Mr. Kiernan’s valuable paper on the true physiology and anatomy of the liver appeared. But the chief point which is worthy of notice is this, that whenever there is a delay in the circulation of the blood in the hepatic veins, in consequence of an irritable, nervous, irregular, or disordered heart, such delay, so long as the cause exists, must influence the free circulation of the portal blood in the lobules, and also the usual separation of a proper quantity of bile from the venous plexus in these lobules. What is the usual result of such congestion in other organs of the body? Thickening or adventitious depositions of the surrounding parts. Hence, we soon find that the delicate and reticulated circumjacent Glisson’s capsule becomes hypertrophied. Pressure is thus made from without the lobules upon these highly vascular bodies. The whole organ becomes gorged with blood, which now cannot circulate with freedom, although the heart may be relieved and calmed in its unnatural actions. What, then, is the next stage towards this progressing disease of the liver? The trunk of the portal vein being permanently distended beyond its natural capacity, the weaker vessels will soon yield, and fail to retain their fluid contents; the origins, therefore, of the intestinal arm of the portal system give way under the pressure, and hence we soon find the patient becoming ascitic. Dropsy of the peritoneum thus succeeds these several stages of disorders in the hepatic circulation†.

The following case illustrates this change in the liver, and its fatal results:—

Mrs. Banks, aged fifty-five, married, was admitted, with the following symptoms:—Countenance thin, but healthy; some emaciation; abdomen enormously distended with fluid; abdominal parietes tense and shining;

* Vide Appendix.

† On viewing the abdomen of a confirmed case of dropsy from hepatic disease, we frequently notice that this region exhibits a number of enlarged and meandering veins, which may be distinctly seen to consist of an anastomosis of the epigastric with the mammary veins. Whenever this diagnostic sign is present, we may safely conclude that portal congestion from hepatic disease exists: the body of the gland presses upon the ascending cava and azygos veins, and thus impedes the circulation of the abdomen; while the whole volume of portal blood is unable to traverse the liver, and hence it finds its way to the right side of the heart by means of the above anastomosis. I have usually noticed that the above appearance contra-indicates the operation of tapping, as the patients rarely survive it, and, even if they do so, the fluid soon reappears.

fluctuation very distinct, especially at the linea transversalis; percussion clear in front, dull at the flanks; legs slightly œdematous; urine scanty, and very high-coloured, clear, sp. gr. 1020, no albumen, and acid. She stated that she noticed the swelling of the abdomen gradually approaching twelve months before her admission, having been previously of a "bilious" disposition, and that her distress was so great, that on Good Friday her medical attendant tapped her, and drew off about two gallons of clear fluid, but that on Easter Tuesday her "belly" was as large as the day she was tapped, and she therefore came here the following week, entreating us to tap her again, as her "own doctor" had declined doing so at such an early period after the first paracentesis.

Of course we attempted to promote absorption, or removal of the effusion by hydragogues. Elaterium, leeching over the liver, diuretics, and iodide of potassium were severally resorted to, but they only tended to weaken her, without relieving the distressed tension of the abdomen. The liver could be occasionally felt under the ribs, hard and enlarged. There was no suspicion of any other organic disease, and at length her physician was reluctantly compelled to order her to be tapped, especially as some dyspnoea had crept on from day to day. Six quarts of fluid were accordingly drawn off, and in the course of the night, on getting out to the chair, an enormous gush came away, literally soaking through the mattress, bed, &c., and running along the floor of the ward for several yards. The patient was not faint or otherwise overcome by this second loss, but, on the contrary, appeared more cheerful and more comfortable for three or four days. However, the abdomen rapidly filled, delirium set in, vomiting of green bile, flagging of the vital powers, and she sunk in thirty-six hours after these symptoms manifested themselves.

On a *post-mortem* examination the viscera of the chest were observed to be free from disease, except that the lungs were congested with serum (œdema pulmonum), and the cavities of the heart slightly dilated. In the abdomen the liver was found to occupy more than half its usual space; it was of a rhubarb tint, studded with yellow points of granular matter. On incising the organ, the true cirrhosis of this viscus was manifest, and, on more minute inspection of slices of it under a powerful microscope, it was evident that the increased bulk of the organ depended upon an enormous and a very general deposition of fat globules around the hepatic lobules, that is to say, lying in the interlobular spaces, whilst smaller granules, more closely packed together, were visibly dispersed through the meshes of the lobular plexus of veins and ducts, and there were distinct traces of inflammatory action, doubtless the result of the presence of this interstitial deposit, within and around the lobules themselves. The peritoneum was pale, and full of fluid; the kidneys lobulated, with general absorption of their vascular or secreting portion. The remaining organs were healthy*.

Physiology and chemistry combined have pointed out to us that the liver has something more to do in the animal economy than the mere separation of bile, at least of a fluid destined only to stimulate the intestines, mingle with the chyle and food, and carry on the varied processes of digestion, of nutrition, and of fœcification. The liver is an auxiliary to the lungs. Carbon is largely separated by the former, and nitrogen by the latter. We see that upwards of 70 parts out of 100 of human liver consist of osmazome, stearine, elaine, resin, oleic and margaric acids, gelatine, and salivine. Many of these products, therefore, are separated by the liver as excrementitious matters, and are destined to be thrown off into the alimentary canal. It cannot be wondered at, therefore, as I have elsewhere adverted to, that when some of the elements of these products are pent up in the circulation, in consequence of the congested state of the lobules of the liver described above, that symptoms, more or less alarming, should arise from this circumstance, just in the same way, *mutatis mutandis*, that we find the springing up of cerebral symptoms in organic changes in the kidneys, attended with a disordered and diminished secretion of urine. One of the earliest indications of a congested hepatic-portal system is the occurrence of hæmorrhoids—in other words, gorged intestinal-portal veins; and the free use of saline purgatives, with an occasional dose of calomel, tends more to relieve the two extremities of the portal system, in this painful malady, than any external application that I am acquainted with.

But these observations will be seen practically true in the wards of an hospital, and perhaps they cannot be so well traced any where else. Here is a patient now with us, who was a robust, active woman, as cook. She has been "bilious" for some years past, and requires an occasional smart dose of purgative medicine. But a few weeks ago

* Vide Appendix for a sketch of these inter- and intra-lobular fat globules.

she was seized in the streets with severe pain in the region of the liver, became sick, vomited a large quantity of bilious matter, and was sent into the hospital on the following day. We found the above symptoms had become alleviated by some aperient pills of calomel and colocynth; if there had been gall-stones passing during this paroxysm, as doubtless there were some, yet she was now comparatively easy. But on feeling the hypochondrium there was noticed a large, painful, and circumscribed tumour; no doubt could exist that this was the liver. Leeches, anodyne fomentations, and poultices were applied, and active purgation again resorted to. The biliary secretions were the colour of the darkest chocolate; but in the course of a fortnight, after persevering in the same plan of treatment, the large tumour had nearly disappeared, and all tenderness was gone, the secretions were healthy, and the patient became convalescent. I should add, there was no jaundice. What could this hypochondriac swelling proceed from? It seems almost certain that it was hepatic, springing from a sudden delay and consequent congestion in the whole biliary and portal circulation, from some obstruction at the mouth of one or more of the biliary ducts. That there was no jaundice is readily understood, since this change does not take place so long as there is a plentiful separation of bile from the portal blood; but, whenever this separation becomes diminished and deficient, the blood, no longer deprived of its biliary principles, is tainted and loaded with the secretion, and the pale capillaries of the vascular system throw out this yellow shade to our eye. Whether the bile is actually secreted and reabsorbed, or whether it is never secreted at all, is an inquiry which pathologists are not yet fully settled about. I cannot but think that the latter supposition is the true one.

The liver is one of those organs of the human frame which is strangely, and in a peculiar manner, under some specific influence of the mind. Instances are on record where jaundice has come on during the perusal of a letter containing some distressing news; and I have seen several patients whose history bore a similar character. Such attacks of jaundice must be classed amongst those diseases which spring from moral causes, and they certainly do not require the constant dosing of blue pill and black draught which the jaundice from a disordered liver calls for. The lobules cease to eliminate bile; they do so, from some powerful impression made upon them through the medium of the nervous system; but, what that impression is, we are as ignorant of as we are of that secret power which induces us to perform an act of volition. A near relative of mine, who was living in comfortable circumstances, with a moderate income, but who was naturally of a nervous temperament, embarked in an undertaking which might have rendered him comparatively penniless, or from which he might have realised some hundreds of pounds. Although he had enjoyed excellent health prior to this anxious enterprise, yet now he became intensely jaundiced, and remained so during ten or twelve weeks, in spite of the large quantity of medicine which he took. He was so vividly yellow, that he was known in the town as "the Prince of Orange." The business in which he had embarked was still pending, and, as he had to appear in public towards its conclusion, he was the more anxious to obtain a natural hue to his features; but it was in vain, for he appeared to get more and more yellow as the affairs approached their termination. However, the week arrived, and on the Thursday evening all was most satisfactorily arranged, and his anxious expectations fully realized. He went to bed with a light and a cheerful spirit, and on the Saturday morning his family could scarcely trace a vestige of his yellow tinge, and he himself was astonished at the rapid and unexpected change in his countenance and skin. He has not ventured to plunge into such speculations since, neither has he known a day's illness from that period, after the lapse of seventeen years.

A similar instance occurred in this hospital, where a father lost his wife and two children by scarlet fever in a day or so. He became intensely jaundiced, but, with active purgative salines, he recovered in a week or ten days.

A young physician, whom I have the pleasure of knowing, was severely jaundiced during the whole time that he settled himself to study for his examination; Aretæus disturbed him very much, and, although he was well prepared in every department of his professional acquirements, yet his great fears arose from the idea that this author would be his point of defeat: however, he did pass a very excellent examination, and in a few days afterwards he lost his jaundice, and has had no return of it since.

But, on the other hand, it must not be supposed, from the preceding observations, that all forms of jaundice are equally mild in their progress, and rapid in their favourable termination. I well remember a severe case of this disease, in a strong vigorous mechanic, accompanied with wild delirium; there was no swelling of the hepatic

region, neither were the constitutional symptoms alarming, except the constant delirium; and this symptom was in itself quite sufficient to justify us in forming an unfavourable prognosis of the case. It terminated fatally in ten days, notwithstanding the activity of treatment, by depletion, calomel, and purgatives, &c. The liver, when cut through, was one mass of yellow matter; in fact, it was intensely jaundiced, so that the gorged biliary ducts obscured every other set of vessels. There was a loaded gall-bladder, but the *ductus communis* would not admit an eye probe; It was obliterated by adhesive inflammation and thickening of its coats.

It has long since been observed, that whenever delirium sets in during the early stages of jaundice, and that this disease has been ushered in with two or three sharp rigors and subsequent febrile excitement, the patient, (and I may add especially if she is an adult female) soon passes into a very dangerous condition; that calomel does not arrest the disease, and that the prognosis is unfavourable.

The following striking case illustrates this remark:—Mary Mahoney, aged twenty-eight, a servant, was admitted, labouring under the following symptoms. The countenance was jaundiced; she complained of pain in the right hypochondrium and epigastrium, increased on pressure; there was some pain extending round the lumbar region also; pulse 120, small; urine high-coloured, scanty; bowels moderately open; evacuations resembled a mixture of chalk and water. She stated that she had suffered from slight pain at the epigastrium for two months past, but that it became much aggravated three days before her admission; for which she was bled, and took some aperient pills and medicine, without the slightest relief. The hypochondrium was now covered with forty leeches, and ten grains of calomel were put upon her tongue; but in a few hours the vital powers sank so rapidly, that it was found necessary to administer the sesqui-carbonate of ammonia, gr. v., in camphor-mixture, every three or four hours, and to allow her to take beef-tea, with an occasional tablespoonful of brandy, whilst the calomel was repeated on two separate occasions. Three days after her admission the following severe symptoms were noted down:—“Countenance has become more anxious, and is still jaundiced; the skin bathed in a clammy perspiration; cheeks of a livid red; lies half conscious, but answers rationally when spoken to; gums sore; tongue loaded with a heavy white mucus; evacuations three or four daily, watery, and tinged with green bile; respirations fifty-two in a minute; refers all her pain to the right side. Abdomen is more supple, and does not resent pressure now. There is small, or pneumonic crepitation, over the lower lobe of the right lung, mingled with rhonchus and sibilus, which latter sounds are heard throughout the whole of this lung. Pulse 128, very feeble.” From the period of this report she was sustained by strong animal broths, eggs, brandy, &c., and laudanum was given at night, partly to procure rest, and to check the tendency there was to diarrhoea; but she gradually sunk, and died ten days after her admission, and thirteen from the period at which the acute symptoms presented themselves.

On examining the chest, there was found a pint and a half of serum effused in either pleura. Over the lower lobe of the right lung there was coagulable lymph; the mucous membrane of the bronchi leading to this lobe was highly injected, and the tubes dilated; the substance of the lung solidified, and some dirty-coloured pus escaped when it was incised*. Heart unusually soft, but otherwise healthy. In the abdomen the whole anterior surface of the diaphragm was in close apposition to the liver; the adhesions could easily be separated, but the surface presented a very vascular appearance, and no doubt that the first stage of adhesive organization between this muscle and the liver had commenced. The posterior surface of the liver was feebly adherent to the stomach, and, on separating these two organs, a dark sloughy surface of liver was seen at the base of the lobulus Spigelii, which had produced a corresponding breach of surface on the peritoneal coat of the stomach. On opening the gall-bladder, it was found that the two inner coats were destroyed by ulceration, and also the substance of the liver immediately beneath it. The ducts were thickened, but pervious. The substance of the liver was studded with abscesses, varying in size from a pea to that of a walnut; their contents were full of purulent matter deeply stained with green bile, but their cavities were nowhere lined by a membrane. The sub-lobular hepatic veins contained matter of the same description as these cavities, and the whole structure of the organ was soft; some parts were intensely red, whilst others were mottled. The left kidney was studded with red puncta, and some pus exuded from its tubular structure when cut open.

* Grey hepatization, the third stage of pneumonia.

The following instance, however, tends to show that the acute forms of hepatitis may localize themselves in one portion of the liver, whilst the bulk of this viscus remains altogether free from inflammation, in the same manner that lobular inflammation of the lung may exist, and run through its stages to a fatal termination, without implicating its adjoining lobes.

Lydia Aubray, aged twenty-two, a servant:—Countenance pale and expressive of great suffering; respirations short and abdominal, 36 in a minute; tongue with white patches along its surface, moist; pulse 100, small and feeble. On viewing the abdomen, there is a manifest circumscribed tumour, as large as an orange, occupying the whole of the epigastric region, pulsating, though there is no detectible pulsation in any other part of the abdomen. She complains, on interrogation, of pain at the epigastrium, somewhat increased on pressure; nausea; night perspirations; catamenia absent for eight months past; bowels open. Her history was very brief and concise. Ten days ago she was suddenly attacked with acute pain in the right hypochondrium and epigastrium, and left shoulder, which had not left her entirely on her admission into the hospital. On examining the thorax, the following note was made:—"Great and general dullness over the whole of the left side; feeble respiration, heard here and there only; right lung, loud vesicular breathing throughout; no ægophony detected."

Now, it was too manifest that the symptoms of thoracic effusion, and the questionable hepatic tumour, would not yield to medical treatment, especially as the vital powers were already flagging. It consisted in the application of leeches to the right side; calomel and opium every four hours; inunction of strong mercurial ointment in the course of the absorbents of the thigh; but these measures proved utterly unavailing, for in twenty-four hours after her admission she was seized with an acute pain under the left mamma; respirations rose to forty-two, and very shallow; pulse 140, thready; great increase of pain when she attempted to lie on the left side; profuse perspirations. These aggravated symptoms set in at three A.M., and terminated in death at ten P.M.

The body was examined twenty hours *post mortem*. On opening the chest, the left pleura was nearly filled with whey-like fluid; the lung was compressed, lying on the vertebral column; soft flakes of lymph adhered to the costal pleura; the inferior edge of the lower lobe of this lung was firmly adherent in one point to the surface of the diaphragm; the right side was quite healthy; the pericardium contained three ounces of thick whey-like serum, interspersed with a few flocculi of lymph; opposite that portion of the membrane adjacent to the lung, a faint adhesion was found with the pericardium; the membrane was highly vascular at this spot; the inner membrane of the left ventricle tore off with much greater ease than that of the right. On separating the above viscera from the diaphragm, a large gush of fluid followed, similar in colour and consistence to thick cream. The separation was found to have torn away a portion of the muscular structure of the diaphragm, and, on passing the finger through this rent, it entered a large cavity formed in the whole of the left lobe of the liver. The hepatic substance was gone, and it was only in the walls of this cavity that any structure analogous to liver could be traced. The interior of this cavity, which would have inclosed a large orange, was lined by a tolerably thick membrane, white, and adhering firmly to the adjacent surface. The right lobe was congested with blood, but quite healthy. Some peritoneal inflammation had been recently set up around this abscess, as there were flocculi of lymph between it and the arch of the colon. No hydatids were seen. Kidneys, spleen, and uterine organs particularly healthy. The situation of the abscess, it will be observed, was directly over the aorta as it emerges from the chest, and lies between the two crura of the diaphragm; hence the fluctuation and pulsation of the tumour are readily explained.

A case precisely analogous to the above has recently occurred, which terminated fatally in six weeks from her admission. The patient was a married woman, thirty-five years of age, and she had observed the epigastric fulness ten weeks; there was also distinct pulsation and fluctuation; and the diagnosis in this instance proved to be correct, namely, that it was a large cyst of hydatids in the substance of the liver. In addition to the hepatic cyst, there were evident traces of acute inflammation in the large hepatic veins and inferior cava; purulent matter, mingled with coagula of blood, was found in both of these sets of vessels, and their inner membranes highly injected, to which some of these coagula firmly adhered. There was no jaundice, but obstinate diarrhæa; neither was there any cerebral disturbance beyond coma, a few days before dissolution.

The preceding cases, it will be acknowledged, are some of those instances of acute (phlebitic) inflammation

of the liver which are not frequently met with in this temperate portion of our globe, nor do I remember to have seen more than ten or twelve instances of such fatal cases during the last twenty-two years*.

It has been already observed, whilst speaking of the disturbance of the nervous system, and of the derangement of the cerebral functions from a morbid collection of bile in the system, that very many instances occur where all the symptoms of a threatened attack of apoplexy exist, which are wholly referable to a disordered state of the liver. When we review the comparative analysis of the effete matters thrown off by the liver and the kidneys, and observe the large amount of carbon and nitrogen which these organs separate from the circulation, it need not be a matter of surprise that similar disturbances arise in the head and in the nervous system, from a gorged and torpid liver, which are seen to occur from urea and other elements of urine being pent up in the system. Why should not the elements of bile, so long as they circulate in the system, and are not duly and actively eliminated by the lobules of the liver, be considered equally as poisonous to the nervous system as is urea in ischuria renalis, or as is laudanum when taken for a suicidal purpose? It repeatedly happens that a strong, and plethoric labourer seeks relief amongst the casual patients in the out-door department, complaining of a distressing sense of giddiness, fear of falling down in the streets, tinnitus aurium, sleepless nights; or else the very reverse, heaviness, and disposition to sleep at all hours of the day, if he only sits down for a few minutes. Such symptoms, it must be acknowledged, are too often regarded as the precursors of apoplexy, and the man is actively bled, cupped, and blistered. No one will deny that such alarming symptoms demand some vigorous and active treatment; but the question at issue is simply this: Do such symptoms fade away under the active antiphlogistic treatment so readily pursued by many? Doubtless they do not. Whereas, if, as is usually the practice here, the patient is ordered a full dose of calomel, for instance ten grains, and the same quantity of extract of colocynth, and that the latter is repeated three or four times a week in smaller quantities, followed by a cathartic draught; and, further, if the alvine secretions are observed to pass from a dark mahogany colour to that of an ochrey tint; the usual result is a disappearance of all the cerebral symptoms, in proportion to the clearing of the loaded gall-bladder and its adjoining ducts.

The late Mr. Abernethy was accustomed to observe to his class, in his usual quaint style, that, if ever they wanted to solicit any favour from some superior in life, they should be careful to make their wishes known, first, to the *valet de chambre*, ascertaining from him at the same time, if possible, whether his master had been to the water-closet that morning, and whether he had been pleasant in his temper since; "for," said he, "if an irritable fellow does not get a comfortable evacuation every morning after his breakfast, he is sure to be sour and irascible the whole day afterwards."

There is much truth couched in this rude observation, and the influence of the hepatic circulation and secretion over the nervous system is too remarkable to escape our attention. But, as this interesting field of clinical study has been already entered into, I need not enlarge any further upon the subject.

The SPLEEN, under disease, or whilst giving rise to various symptoms of disorder in the animal economy, must next come under observation. But here we have an insurmountable difficulty to cope with, inasmuch as the physiology of this organ is but little understood to the present day, notwithstanding the numerous conjectures and hypotheses that have been put forth by men in all ages concerning its real nature and use. All one can assert, with the present amount of knowledge, respecting the use of this viscus, is simply this, that there is scarcely a doubt but that the venous blood of the spleen is useful in the functions of the liver; and that its juxtaposition with the stomach, duodenum, liver, and pancreas, throughout the larger number of lower animals, would imply that the splenic blood undergoes some important change whilst it "wends its way" through the numerous cells of this gland, and that the blood of the *venæ portæ* is aided, in some important though hitherto undiscovered manner, by the accession of splenic blood†. These surmises (for they are no more) must be left for further inquirers.

* The number of patients which have come under my notice during this period amount, very nearly, to three hundred thousand, and the whole of such instances of acute inflammation, and of purulent depositions in the liver, have occurred in females who had previously suffered with more or less irregularity or cessation in the uterine functions. Does not this fact tend strongly to prove that, as I have before remarked, the liver and the uterus perform offices which, in health, essentially depend upon each other?

† It is stated that splenic blood does not coagulate, as other venous blood.

It occasionally happens that the spleen is the seat of disease, and that this disease most commonly has been set up by protracted fits of intermittent fever; an enlarged spleen may, however, arise from no assignable cause, and empty its contents of blood into the alimentary canal, and produce an alarming seizure of faintness, pulselessness, and apparent death of the patient.

The latter circumstance occurred with a policeman, whose beat around the suburbs of London obliged him very often to retire under a hedge to answer nature's call. He was seized, in the course of his duty, with diarrhœa, and became somewhat reduced by it; however, he continued his work until he observed that, on repeated occasions as he retired to relieve his bowels, he passed no fæcal matter, but wholly clotted blood. He soon experienced a swelling under the false ribs of the left side, and was obliged to lay up on the sick-list, from exhaustion. A few weeks after this, he was suddenly seized with profuse bleeding at the nose, and, as all remedies had failed, he sought relief for it at the hospital. The posterior nares were plugged, and the bleeding was arrested. On examining the abdomen, the spleen (for such it doubtless was) occupied the whole left hypogastric region, stretched across to the right side, and hung down as low as the umbilicus; it was not painful to the touch. He was ordered a generous diet, with wine or porter, and the nitro-hydrochloric acid in compound decoction of sarsaparilla, with its extract. He was quite chlorotic in his appearance before this treatment was adopted, but soon fattened, and became somewhat ruddy in his face. In making the usual morning visit, I once found him much exhausted, and almost pulseless, in consequence of having passed an enormous mass of semi-clotted blood from the bowels, and a smaller quantity was brought off by vomiting; however, in the course of the following day he rallied, and, to our surprise, the large splenic swelling had sunk down to such a degree that it was hardly sensible to the touch, and from this period it slowly but steadily disappeared. He was discharged convalescent, and returned to light work in the police force.

The second instance that may be adduced of the influence of a diseased spleen over the general economy was in a young man, a shoemaker, aged twenty, who was admitted under the following circumstances, Sept. 1:—Pale and emaciated; abdomen large, tense, and full of fluid; tongue red, glazed, and chapped; frequent diarrhœa; pulse feeble; urine scanty and high-coloured; slight œdema of the legs. Had a severe attack of ague some years ago; has been in the habit of throwing up, for three years past, large quantities of blood, at intervals of six or eight months, together with loss of blood from the bowels. In the last attack, which was a month ago, he passed a great deal of blood, but did not vomit any. Abdomen swelled fourteen days ago. On examining the abdomen, a large spleen can be felt and tilted under the fingers. He was ordered twenty minims of our compound tincture of squills in camphor julep three times a day*. On the 12th the medicine had produced diarrhœa. The dropsical symptoms increased, and on the 17th he was so far rallied that it was deemed prudent to relieve the distressing tension of the abdomen by tapping. He derived great comfort from the operation, but in the early part of October the effusion again increased so rapidly that he was once more tapped on the 11th; but from this operation he never rallied, but continued to sink, and died on the 14th of November. The abdomen was enormously distended with fluid; the anterior edge of the liver corresponded with the fifth rib, whilst the whole hypochondriac region on the right side, and the greater part of the left lumbar region, were occupied by the spleen, which weighed upwards of two pounds. Its capsule was much thickened, and between it and the substance of the viscus was a deposition similar to fibrine, and analogous to the clots found in the heart *post mortem*; this gave to the spleen the appearance of a large kidney, with its renal capsule; the texture of the organ was very firm and granular, of a natural colour, and of the hardness of liver; there was chronic peritonitis; the fibrinous and almost cartilaginous appearance was subsequently found to pervade the whole texture of the spleen, so that it had lost its spongy texture, was hard and firm, and the cells were obliterated by this adventitious deposition; the liver was atrophied, pale, and hard.

In treating of TUMOURS generally, it may be affirmed that those of the thorax are much less difficult to diagnose than are those of the abdomen; we can call in the aid of auscultation in the former class, whilst this helpmate affords but a trifling assistance in the latter; and, even in ANEURISMAL TUMOURS of the chest, the collateral

* This valuable tincture is thus composed:—℞. Spir. æther. nitrici ℥vi.; acet. colchici tinct. scillæ aa ℥ss.; extr. elaterii gr. vj. Macera per dies septem. Dose from ten to twenty drops.

evidences afforded by the sense of hearing, are oftentimes so full of information, that the diagnosis of the disease is rendered easy, whilst such a change in the arterial circulation of the abdomen may lie undetected for months, nay, for years, in consequence of the little derangement it produces to the neighbouring organs; and the loose viscera surrounding it may, for a time, wholly exclude it from our notice.

I well remember the case of a patient in the surgeon's wards who was under treatment for an indolent ulcer on the leg, but who was much troubled with diarrhoea, tenderness in the cæcal region, a red, glazed tongue, and all other evidences of a dysenteric affection of the lower bowel. The right hypogastrium became swollen, hard, though less painful; but the dysenteric symptoms increased, uncontrolled by the various astringents and anodyne enemata which were exhibited. The man gradually sunk from exhaustion. At the *post-mortem* examination we were not a little surprised to find that the cæcal tumour proved to be a large aneurismal pouch of the external iliac artery, which had buried itself behind the loose cellular texture of the bowel, and had burst, discharging some of its contents into the peritoneum of the pelvis, whilst a large mass of blood had escaped behind this serous covering, and was dispersed here and there between it and the spinal and pelvic muscles. There was no pulsation in this tumour, nor any symptoms which could lead to the suspicion of aneurism during life.

An instance, however, of the valuable information derived from auscultation in a case of thoracic aneurismal tumour occurred amongst the out-patients some time since, and in a medico-legal point of view it was of the utmost importance; the disease, although in its early stage, was nevertheless detected, or, at least, there was the strongest suspicion that it existed, and the result proved the correctness of that suspicion. A robust, plethoric, but intemperate woman, aged twenty-eight, came to the hospital in consequence of a sudden attack of hæmoptysis. The expectorated blood was arterial, frothy, and profuse. She stated that her husband, in a quarrel six weeks before, had given her a severe blow on the left breast, since which time she had suffered from pain and an occasional "stitch" under the scapula of the same side. This was her first attack of hæmoptysis. On placing the ear over the chest, there was the most perfect freedom in the respiration, and also in the action of the heart; but over the middle of the left supra-spinous fossa of the scapula there was heard, with every third or fifth inspiration, especially when the act was performed deeply, a splashing or slight gurgling noise. No other morbid sound could be detected in the thorax except this, and the following diagnosis was therefore made:—"Aneurismal pouch either in the arch or in the spinal and adherent portion of the thoracic aorta." She was bled, and I prescribed the acetate of lead in a draught with a drachm of vinegar, and she was requested to stop with us; but this advice was not listened to, and I therefore enjoined quietude, abstinence from spirits, porter, &c., and meat. I, however, felt that I was talking in vain: her depravity and ferocious disposition spoke but too plainly that she would follow the bent of her own vicious propensities. She accordingly went away, and I expected never to see her again if the hæmorrhage did not recur. Some two or three weeks after the above event, we observed a large crowd gathering one morning outside the hospital gates, and a female was hoisted on a shutter, and carried into an adjoining public-house. It was shortly rumoured that it was one of our out-patients who had fallen down in a fit, and a summons came to us to request some one would go to visit the poor woman. I immediately repaired to the public-house, and there recognised the above wretched female a corpse; bright arterial blood was still flowing from her mouth and nostrils, and it was stated by some friend that she had been coughing up blood during the morning, and was on her way to the hospital to seek admission, when she fell down at the spot above described.

The coroner issued his warrant for an inquest, and requested me to make the *post-mortem* examination, which was accordingly done in company with my kind friend Dr. Dyer, one of the officiating clinical clerks. Every organ of the body was healthy, with the exception of the arterial system of the thorax. Just as the aorta bends over to become fixed to the spine, there was found an aneurism the size of a pullet's egg, which had burst, and the whole left pleura was filled with one dense mass of coagulated blood. The ragged edges of the sac were partially adherent to the left bronchus, just after its bifurcation; and a small speck of ulceration could be distinctly seen on the mucous surface of this tube, through which, no doubt, the previous flow of arterial blood had taken place. It should be especially noticed here, for the sake of truth and equity, so important in a court of law, and where the life or liberty of an individual is at stake, that the mouth of the aorta, from its semilunar valves up to the pouch, was

covered with atheromatous deposits. The jury, considering that this fatal disease was the result of the blow given by the husband, returned a verdict of "Manslaughter" against him, and he was forthwith conveyed to Newgate. When the trial came on, Baron Parke would not enter into the case until he had first put the following questions to me:—"Do you consider that the aneurism was produced by the blow?"—"I am not prepared to swear it was, my lord."—"Was the disease which existed in the large blood-vessel a probable cause of the aneurism?"—"It might certainly have been, and, since it is very unusual to meet with that character of disease in the large blood-vessels at so early a period of life, I am disposed to attribute the aneurism to that disease in the blood-vessel."—"Then," said the learned judge, "I must dispose of the charge; there is no case whatever made out against the prisoner, and he may be forthwith discharged."

The following case was one of unusual interest in a pathological point of view, inasmuch as it elucidates the remarkable extent to which a collateral circulation can be set up when the main trunks of the vascular system are either obstructed or obliterated:—

ANEURISM OF THE AORTA; OBSTRUCTION IN AND LACERATION OF THE SUPERIOR VENA CAVA; ŒDEMA OF THE UPPER HALF OF THE BODY.

William Holmes, aged sixty-three, labourer, from the country, was admitted Feb. 19th, presenting the following singular appearance:—Face, neck, and upper extremities livid and bloated to three times their natural size from œdema; conjunctivæ puckered from effusion into their structure. On handling the integuments of the neck, &c., it communicated the sensation of grasping a pig's back, and could not be strictly called œdematous, as in anasarca, for it was more elastic, and recovered itself when pressure was made upon it. The whole surface of the chest was more properly anasarcous, and was studded with a series of large veins, which in many parts had effused blood into the cellular texture, giving rise to several dark patches of ecchymosis. The œdema here gradually terminated, and the parts below the ribs were quite free from it. The epigastric veins were seen to form a tortuous course from the groins to the chest. There was no swelling of the lower extremities. Such was his singular appearance; and, on questioning him, he gave the following account of his sufferings:—Distressing orthopnoea; dyspnoea occurring in paroxysms; slight cough, with tough expectoration; pain over the top of the sternum, and over a space as large as a crown-piece, near the ensiform cartilage; pulse 96, hard, full, and regular; bowels open; urine scanty, thick, clears by heat, and acid. He stated that he was always a healthy man until about twelve months ago, when he felt pain around the left breast, of which he took no notice, as it did not prevent him from working; and only a fortnight ago did the upper half of the body swell, when the pain suddenly shifted to the present spot, namely, over the lower portion of the upper bone of the sternum, and it had remained very acute ever since, with increase of cough, which had been "hanging upon him" for twelve months past.

Auscultation.—Lungs were vesicular in every part behind, with large crepitation over the lower lobes. In front it was difficult to ascertain the condition of these organs from the tumultuous sounds of the heart. Over the præcordial region these, however, were natural; but as the ear passed along the track of the aorta a sound was heard, at its origin, similar to the ordinary bellows' murmur, but which gradually increased in harshness, until, at the top of the sternum, it more resembled the noise made by running the finger quickly down a piece of bombazine or silk, and it was so continuous with the two sounds of the heart, that it was impossible to decide which action it accompanied. At the epigastrium the bellows' murmur was again distinctly heard. The following diagnosis was, therefore, entered in the case-book:—"Aneurism of the arch of the aorta, with great disease of its inner lining, and partial obstruction of the superior vena cava from pressure; no valvular disease of the heart; no pulmonary or abdominal disease."

Feb. 26th. He is much in the same state, perhaps rather better since two applications of leeches to the epigastrium, and a further reduction in the circulation through the means of our compound digitalis pill, with squills and antimony.

27th. Great distress in breathing; eyes more swollen; conjunctivæ very red and puckered; skin beneath the eyes raw from the constant flow of tears. C. C. ad 3viij. regioni cordis.

28th. The cupper opened some of the large veins over the chest, and obtained upwards of twenty ounces in two minutes, with great relief to the patient; some difficulty arose, however, in arresting this profuse venous hæmorrhage; but it was ultimately suppressed by means of a saturated solution of alum. He soon afterwards became very delirious and unmanageable (though he had wandered every night since his admission), declaring that he was locked up in a horrible den with thieves, murderers, &c.: the effect, in some measure, I presume, of the circulation of venous mingled with arterial blood; his orthopnoea became very distressing, and his appearance more extraordinary than before, the face presenting a hue not unlike the colour of a toad's back, when he suddenly expired, after a period of great excitement, at ten p.m., on the 2nd of March.

Post-mortem Examination Thirty-six Hours after death.—*Chest*; the venous turgescence had subsided in some measure. Both pleuræ were filled with fluid resembling dirty barley-water, which oozed out as soon as the lower ribs were cut through: on raising the sternum, and cutting from it the anterior mediastinum, a large cavity was opened full of fluid blood. The inner surface of the central bone of the sternum was indented to the size of half a walnut, by interstitial absorption. The cavity, which proved to be the aorta, was so extensive that it occupied the whole front of the thorax, covered by the pericardium, which membrane was loaded with fat, hanging about like the appendices epiploicæ, and thus the lungs were wholly removed from sight. Similar lobules of fat hung from the costal pleuræ in isolated masses. The heart was not manifestly enlarged; the right auricle was normal; the coronary vein admitted the point of the index finger; the tricuspid valve and its ventricle were healthy. About one inch above the auricle the vena cava superior was contracted to so small a space that it did not admit a common probe; on slitting it, there was found a citrine-coloured substance forming a coagulum, which was half an inch in extent, and on its upper part, where this coagulum terminated, the vessel again became pervious, and here there was a distinct line where the adhesion was final. Directly above this point the coats of the vena cava were white, as if deposits of calcareous matter were upon them, but which proved to be the thin wall of the aneurism beneath, and there was in this spot a rent of the vein, which easily admitted a probe directly into the aorta. Continuing to trace the vena cava upwards, it was now found to be greatly dilated, with the vena azygos opening into it on one side, and two inches higher up were two other venous openings. The inferior and smaller one passed a quarter of an inch outwards, and then suddenly descended, and wound over the pericardium in the same direction as the phrenic nerve, and was lost abruptly in the fat, having no branches into it, yet this vessel was partly filled with liquid blood. The superior passed to the left in the course of the subclavian vein, and, after reaching an inch in extent, it suddenly dilated, and terminated in a cul de sac, with some coagula in it; about a quarter of an inch from its entrance into the vena cava there was a similar rent, as I have before described in the latter vessel, which would admit a common pea, and this rent led immediately into the aorta also. The inferior vena cava was perfect and healthy. The left ventricle was healthy, as were its valves; from the root of the aorta to the giving off of the left subclavian there were eight inches, when it suddenly dilated to such an extent that its right wall was in a line with the root of the right lung, and its left wall in a line with the tubercles of the ribs of the same side. About an inch from the origin of the aorta the vessel had given way, and a coagulum as large as half a hen's egg was found, laminated, tough, and filling up the space, where its pressure had caused the indentation on the sternum already described. The descending aorta, both thoracic and abdominal, was greatly dilated, and covered with numerous atheromatous and calcareous points. Its inner membrane was intensely red.

It is quite unnecessary to enter into any description of those TUMOURS OF JOINTS which characterise the fibrous and serous forms of rheumatic fever, since their peculiarity and the accompanying symptoms are so very striking that it is hardly possible that such articular swellings should be confounded with any other form of disease to which the joints are liable. Nevertheless, there are some practical hints which the ward of an hospital afford which may be worthy of notice. It is frequently observed that the most obstinate forms of sciatica or of lumbago, and rheumatic pains and swellings of the plantar fascia, commonly termed chronic gonorrhœal rheumatism, resist all the ordinary forms of treatment; colchicum, guaiacum, turpentine, iodide of potassium, extract of stramonium or of conium, Dover's powder, with warm or with vapour baths, are severally exhibited without affording any decided relief, when the introduction of an urethral bougie twice or three times a week will subdue the rheumatic swellings,

and alleviate, nay, oftentimes completely remove the disease in question. It has been asserted, that, this treatment should be adopted only when the rheumatic pains depend upon some stricture along the course of the urethra, and that, when this cause of the disease is removed, its effects upon the fibrous tissues of joints generally, or of the sciatic and lumbar nerves especially, are also removed. But such reasoning is wholly opposed to the practice in question. It is by no means a necessary consequence to gonorrhœal rheumatism of the ankles and plantar fascia, or to an obstinate form of sciatica, that there should exist a urethral stricture; the counter-irritation produced by the frequent introduction of a bougie, even where no stricture exists, will oftentimes remove, in a few weeks, the most inveterate form of chronic rheumatism which has been under medical treatment for many months. It is undoubtedly true that a neglected stricture, near the prostatic portion of the urethra, will keep up a severe form of lumbago or of sciatica for months, or even years; but it is equally true that the disease may be thus eradicated, although there may be no urethral stricture to overcome.

I was first taught this practice during the years 1826 and 1827, by the gentleman with whom I resided, who had been in active service during twenty-one years in the Army, and who then served the office of Inspecting Surgeon to the Recruiting Depot. I found that very many cases of obstinate pains about the plantar fascia, and of sciatica, which might have been supposed to have arisen from long marching in young recruits, were treated successfully by this surgeon with the bougie. The fact of such patients not suffering any inconvenience in micturition forms the main obstacle to the persevering use of this mode of treatment, since it naturally appears to them quite foreign to their cure that such unpleasant, and apparently misplaced remedial measures should be employed, as the frequent introduction of a bougie. The plan of treatment, therefore, can only be carried on effectually under such discipline as that which is found in military and in naval service, or in that of public hospitals. The intimate sympathy which exists between a diseased urethra and the nerves upon which the kidneys lie will readily explain the frequent combination of disordered urinary secretion, lumbago, &c., with stricture*; and, if this latter disease remains neglected by the patient, it is oftentimes the fruitful source of disorganization of the kidneys themselves; so that in the majority of fatal cases of stricture, issuing in ruptured urethra, diseased bladder, or in those cases of retention which require that the surgeon should cut down upon the stricture to relieve the distended bladder, it is ordinarily found that the kidneys are far advanced in disease, and partially destroyed by the processes of continuous acute inflammation.

Some difficulty occasionally arises in discriminating between SCIATICA and diseased or INFLAMED HIP-JOINT; and when such is the case I have invariably found that the following simple method of handling the painful parts has determined the character of the disease:—Place the thumb of the *right* hand firmly on the great trochanter, and the third finger on the tuberosity of the ischium; then drive the forefinger into the space that exists midway, and a little above these two points, and if sciatica is present the patient will certainly wince. The fingers here describe a triangle, the apex of which, whilst it points towards the sacro-iliac symphysis, also rests upon the precise exit of the nerve from the pelvis, as it passes over the pyriform muscle, and the base is formed by the line from the trochanter to the ischiadic tuberosity. But, in order to ascertain if disease of the hip-joint is present, reverse this triangle, and place the thumb of the *left* hand upon the great trochanter, and the third finger upon the tuber ischii, and let the forefinger be driven into the apex of that triangle, of which the two former fingers describe the base, and it will be found to be immediately over the articular surface of the hip-joint, and which will certainly cause pain if inflammation exists in it. It will be observed that the apex of this triangle looks downwards towards the lesser trochanter. These directions apply to the detection of the seat of pain on the left side; but, when the right hip is examined, the hands of the operator should be reversed to the above description.

* These nerves come out from the spinal chord, and lie in a triangular form behind each kidney; they are the ilio-lumbar, the ilio-inguinal, and the genito-crural.

CLASS VI.

Division I. *Vascular Diseases in Excitement; Countenance flushed.*

From Erysipelas.	From Herpes-zostera.
„ Rubeola.	„ Urticaria.
„ Scarlatina.	„ Phlebitis.
„ „ notha.	„ Rubeoloid fever.

I have already stated, that, when I was induced to sit down and describe some of the assimilations of disease, I never proposed to put forth a formal description of any one disease in particular, much less did I profess to send forth any elementary treatise upon diseases in the abstract. My chief aim has been to group those diseases which, in their rise and progress, so often perplex the most accomplished physician, by their resemblance to other diseases of a totally opposite character, and the symptoms of which are apt to betray an incautious practitioner into a mistaken view of the real nature of the disease before him. To meet, and to obviate, if possible, some of these difficulties, the study of the physiognomy of diseases has been especially dwelt upon in the foregoing pages; and I have endeavoured to adhere to the elucidation of those symptoms which are repeatedly found to be common to several diseases of a fatal nature, but in which the features of the one, if carefully weighed against those of another, may oftentimes lead the medical man to a clear knowledge of the real character of the disease brought under his notice.

The diseases of the vascular system, which are now grouped together, are so palpable to the eye, that a novice can distinguish them. We may have a difficulty in deciding whether a fierce delirium is the result of pneumonia, of arachnitis, or of fever, &c. &c.; or whether a state of insensibility proceeds from a lesion of, or extravasation into, the cerebral substance, or from intoxication, or from a narcotic drug, or from the accumulation of urea and such-like animal poisons in the system; but this difficulty is not met with when we view the diseases of the vascular system: these are apparent at the first glance of the eye; there is little mimicry here of one disease with another—erysipelas never presents the appearance of nettle-rash, nor does this latter disease give rise to the suspicion of the existence of scarlet fever. However strong the broad lineaments of a family likeness are portrayed, as in this class of diseases, there are, nevertheless, such individual peculiarities in each one of the family, that, although they are easily recognised as being all of the same genus, yet the species are sufficiently distinct to allow of no confusion or misunderstanding of the one with the other.

Again, the very mode in which the system suffers at the ushering in of the various diseases which are called the “exanthemata” tends to assist the physician in his diagnosis of the approaching malady, before it has actually developed itself on the surface of the skin. Thus, the dull aching pain of the “small of the back,” which succeeds the shiver of this class of acute diseases, is one of the most important pathognomonic symptoms which we meet with. In addition to this, we also have some symptoms which are peculiar to one disease, but which are not to be expected in another; thus the catarrh preceding measles; the acute pain in the loins, subsequent to the incubation, and prior to the eruption of variolous poison; the tonsillitis before the rash of scarlatina appears; the derangement of the digestive organs antecedent to urticaria; and the adynamic type of fever which ushers in the rubeoloid or spotted form of this disease, are so many peculiarities which characterize the several maladies in question.

When ERYSIPELAS has fairly made its appearance on the surface of the skin, it is easily recognised; and, at this stage, it seems of the utmost importance that the stomach, liver, and bowels should be smartly acted upon by a brisk dose of calomel and purgatives, preceded, however, by an emetic. The seat of attack in the metropolitan hospitals, when the disease occurs in an idiopathic form, is almost invariably in the nose or cheeks, rapidly spreading itself over the forehead, scalp, and neck, &c. It is also of great practical utility that the head should be shaved as soon as the eruption shows itself on the face, for it can then be done with ease to the patient; but, when the erysipelas creeps over the scalp, the operation of shaving the hair is almost impracticable, and the attempts to do it are most distressing to the patient, and excite the already inflamed surface to an increased degree of action. Besides,

this disease, like continued fever, destroys, in its progress, the nutritive bulbs of the hair, and leaves the patient more or less bald for life, which is, in the female sex at least, a point of great consideration*.

It has long been a favourite practice in the Middlesex Hospital, and which, I believe, was first introduced by myself, to cover the face and head with flour from a dredging-box, or, what is far better, by means of a coarse lace net, such as women's caps are made of. But here I should remark, that two or three practical points ought to be attended to. The flour should be of the finest kind, without any branny substance amongst it, and it should be always taken from the bottom of the bin, in order that it may be as moist as possible, because, when it has been exposed a short time to the atmosphere of a hot sick-room, the farinaceous scales dry, and render the flour harsh and uncomfortable to the inflamed skin; whereas the moist, cool flour, well shaken on the surface, is followed by a pleasant sensation, and the individual experiences great comfort from its application. It is not enough to shake the flour lightly over the surface; it must not be spared, but should be so freely employed that not a portion of erysipelas skin can be seen through it; and when the patient shifts his posture, or rubs any off, the attendant or nurse should again shake more over the exposed surface. The eye should be closed, or the eyelids covered with a small piece of fine damask linen, whilst the flour is applied, as it is apt to irritate the conjunctiva if it falls upon this membrane. I am very sure that my experience will warrant me in the assertion that this remedy is far more pleasant, efficacious, and capable of being endured for any time, than is the objectionable plan of hot fomentations, cold lotions, cotton wool, &c. &c., which either give rise to a constant sense of chilliness by their evaporation, or tend to increase the inflammatory action of the diseased parts. Mr. Higginbottom's plan of circumscribing the erysipelas by nitrate of silver has been fully tried here in many instances, and with signal benefit; the erysipelas has rarely transgressed over the boundaries of the line marked out, and it certainly is a most valuable remedy. In one instance of a young woman, however, the mark which was made across the forehead remained for some weeks after her convalescence, which gave her the appearance of wearing a white bandage around her head.

As I now draw towards a conclusion of this volume, I must repeat that I have often been fettered in its progress by feeling myself at a loss to determine what cases should be presented, in order to elucidate the several diseases treated of; since the numerous illustrations of almost every disorder which is known yearly pass under my notice and superintendence. A choice, therefore, from such a valuable and instructive store of pathology was by no means an easy task; and even now, if the whole is reviewed, it will be seen that many diseases have not been touched upon at all, and others have only been slightly glanced at. Amongst the former I may instance that of eruptive complaints, a few only of which have been alluded to in this class, since the patients under their influence present nothing in the countenance which is either striking or instructive to the eye. Nevertheless, I could say something on the varied hints which long-continued hospital experience affords in the treatment of some of these diseases also; but I will hasten to mention a few. *PRURIGO*, *PSORA*, and *SCABIES* are never known to occur on the face; the former disease, where it attacks the pudendum or scrotum, is oftentimes more effectually soothed by a lotion composed of two or four drachms of the terechloride of carbon or chloric ether, in a pint of distilled or elder-flower water, than any other application that I am acquainted with; at the same time, a warm bath administered every evening affords a calm and refreshing night's rest. Many pounds of sulphur ointment have been saved to this institution by pursuing the following plan rigorously for three days and nights on patients who have suffered from itch. We provide him with old linen and a worn-out sheet; and each morning and evening he is ordered to make a good lather of yellow soap in his hands, and thus dip them wet into a basin of sifted or fine sand, and assiduously rub every part of the

* Some time since a lady's maid was admitted into the medical wards with a sharp attack of fever, attended with some delirium. I ordered the head to be shaved. She certainly had a most luxuriant growth of jet black ringlets; and when she heard that they were to come off she became so excited, that I was reluctantly compelled to forego the prescribed order. She got worse, and I again tried, through the nurse, to get off the hair by stealth; but she was still aware of our designs, and screamed and fretted herself to such a degree, that I wholly abandoned the idea. She became ultimately convalescent, and left the hospital. Some months afterwards the nurse of the ward informed me that she had called to pay her a visit, and, with melancholy and disappointed face, exhibited her head. The scalp was nearly bald, and some few patches of her once black hair remained only over the temples, but all the rest had fallen off, and she presented a forlorn picture compared to her former state. But the most singular part of the circumstance was, that she became vicious and angry with the nurse for not having tied her down in bed, as she observed, and thus shaved her head by main force. This, and other such instances, convinced me that a medical man should always insist upon the head being shaved, both for the sake of the patient's convalescence as well as for the subsequent growth of the hair.

body on which the slightest trace of a vesicle exists. Having performed this ablution until the skin tingles smartly, he wipes himself dry, and then rubs the common ung. sulphuris firmly into the itchy parts. He is then enveloped in the winding-sheet, and has a pair of old gloves on his hand, and he is left till night, when the same operation is pursued, and repeated daily until the fourth day, when he is ordered to indulge (and a great indulgence it is) in a warm bath, where he again lathers his body in plain soap and water, puts on fresh linen, and is provided with clean sheets, and the cure is from thence invariably effected. The vesicle, of course, is broken by the friction of the sand and soap; the acarus is exposed, and this ectozoon receives his death-blow by the inunction of the sulphur, which is oftentimes not accomplished by the mere application of sulphur ointment alone. The use of sand-soap cakes is more elegant, though not more efficacious. It is a cheap, useful, and effectual mode of practice, and is quite new to all to whom I have related it.

HERPES ZOSTERA, or shingles, is one of those painful, though innocent, diseases which is but lightly thought of. The late Dr. Thomas, author of "The Practice of Medicine," suffered occasionally from it, and his distress was so great that it was often attended with delirium and much fever. The most soothing application that I am acquainted with in this form of rash is the smearing the whole crop of vesicles with fresh-made ung. hydr. ammonio-chloridi twice or thrice a day. Again, I may remark that in all those forms of eruptive diseases attended with more or less exudation, whether they originate from impetigo, scabies, eczema, or porrigo, &c., it has appeared to me to be the most injudicious line of practice to administer alkalis, locally or generally, until we have ascertained the chemical character of the discharge itself; and I believe it will be almost invariably found that the discharge, on the scalp especially, has an alkaline reagency upon test-paper. The disease, therefore, should be treated upon more scientific principles than is done by many men. If the exudation is alkaline in character, nitric acid lotion, in the proportion of half a drachm to a pint of distilled water, should be assiduously applied by means of clean linen cloths, or, if on the scalp, by the use of a common linen nightcap, and small doses of the same acid given internally with some agreeable bitter, as the compound infusion of orange. The reverse of this treatment must be adopted where the discharge reddens litmus. I have witnessed very great benefits resulting from the use of an artificial Harrogate water, made by dissolving a drachm of fresh and good sulphuret of potassium in a pint of water, and applying it constantly to the ichorous surface. The under-mentioned ointment is efficaciously employed in TINETEA CAPITIS when the discharge is subdued*.

No doubt that many gentlemen are consulted by ladies of rank and of fashion for a disfiguring eruption over the chin, nose, and lips, which may be grouped amongst the class Acne, either as the Acne indurata or Acne rosacea; that burly, blotched face which so often leads to the ill-grounded suspicion of habits of intemperance. Few as my opportunities are of prescribing for the above class of persons, yet I have witnessed the most gratifying results from the use of the subjoined lotion in several cases of this kind, which, though it gives an unpleasant appearance to the face, yet this drawback is readily borne with when the eruption has, by its obstinacy, reduced the patient to the willing disposition to be disfigured for a short time that she may regain a pleasing appearance†.

It is important that the sulphur should be very carefully prepared in the washing; and for this purpose it should be found to leave no taste of lime, or of hydrochloric acid, when placed upon the tongue, otherwise it will tend to irritate the surface of the acne. The mistura acaciæ should be made to separate the sulphur into the most minute particles before the menstruum is added.

The most inveterate form of URTICARIA which has come under my notice occurred in a male patient who partook heartily of two kinds of boiled fish, soles and plaice, I think, for supper, but neither of which, it appeared, were fresh. He was brought here within an hour after this repast, and was swollen to an enormous extent in the face, hands, and stomach. There was acute tenderness over the latter organ, and obstinate sickness for several days after his admission. Leeches and blisters were applied to the epigastrium; the spots of urticaria were soothed by goulard lotion, and he

* R. Ungt. hydr. nit. mit., ʒij.; ungt. picis liquidæ, ʒss.; axungie, ʒj. Ft. ungt.

† R. Sulphur. præcip., ʒss.; mist. acaciæ, ʒjss.; aq. sambuci vel rosæ, ʒxij. Ft. lotio.

was ordered an alkaline draught twice a day. At one period the excitement of the vascular system ran so high that delirium with fever arose, but which yielded under the free use of leeches to the stomach and cold to the head.

But there is yet another insidious though milder form of urticaria, without any eruption, if I may give it such a term, which is not mentioned by writers, but which I have repeatedly seen. It is known by one singular peculiarity, which is this, that the person who suffers from it is suddenly aroused, just as he is on the point of loosing himself in sleep, by the conviction that a flea or a bug is fastening on his chin, his forehead, or his neck; he scratches and rubs himself, but gets but little relief, it wears off, and he composes himself once more to sleep, but is again startled by a distinct feeling of a bug running over his face or chest, and he starts out of bed, as I have often known the case to be, gets his candle, and hunts in vain for his supposed unwelcome guest. Of course he fails to find one, and again and again he seeks for "balmy sleep," and at length he falls off and sleeps soundly. This form of urticaria is not uncommon in the palms of the hands, fingers, &c. during the hot fruit season, when a large amount of vegetable acid has been taken into the stomach, and the first described attack always depends, likewise, upon an excess of acidity, or at least on a morbid condition of the gastric juice, and is usually a forerunner of either herpes labialis, constipation, or bilious derangement, &c. The following draught, taken in the morning before breakfast, is most agreeable to such a state of stomach:—*R. Potas. bicarb. gr. xvij.; potas. nitratis gr. x.; magn. sulp. ʒi.; aquæ destil. f. ʒij.* This draught, taken in a state of effervescence, with a tablespoonful of fresh lemon juice, for three mornings, or twice a day for two days, usually disperses the unpleasant attack.

I have seen some obstinate cases of porrigo, and of eczema, both of the head and of the body, in children, yield quickly under the use of small and gradually increased doses of cod's liver oil, until they had taken two tablespoonfuls three times a day. They have commenced with a tea-spoonful in milk, cold coffee, whey, or strong toast and water, and have improved in a very striking manner. The oil should always be taken one hour after meals.

I was shewn by one of the physicians some inveterate cases of psoriasis palmaria which he had successfully treated by issues. The right hand was first attacked by an issue under the spine of the same scapula, and in three weeks the patient was clear from the disease in that limb; the left hand was then similarly treated by an issue under the left scapula, when the disease was eradicated in a fortnight, and the patient, a gentleman's coachman, acknowledged that he had not been so free from the malady for many years. A girl from Windsor, who had been similarly afflicted for nine years, was thus treated, and was perfectly well in two months after the adoption of the above line of treatment.

But I will now give a brief abstract of a pamphlet, which I drew up last year, in order to shew the pernicious tendency of a water loaded with earthy salines in producing inveterate eruptions of the skin, and other distressing ailments; and, from the observations made upon the cases which formed the basis of that pamphlet, I cannot but believe that some obstinate forms of eruptive diseases have their origin in the hard water which the delicate stomachs of many persons are unable to digest. I do this the more readily, as the pamphlet has been favourably received by the public, and by some journals, and has created an interest in the minds of those who are officially engaged in the sanitary condition of towns; added to which, the publication is only to be found in the journal where it originally appeared*.

"Soon after the opening of the railway line from London to Birmingham in 1838, it was considered, by the directors, that Wolverton, a mere farm-house, fifty-two miles from London, or just half way between these two towns, should form a station for supplying the locomotives with water, and that a factory should also be established there. The latter has been accomplished, and now the little town averages 1400 to 1600 inhabitants. There are a church, two public-houses, and various shops, so that it has become a place of some importance in every respect.

* "Sanitary Questions, Observations, and Suggestions on the Wolverton Well-water, as supplied to the Inhabitants," originally published in the *Pharmaceutical Journal*, 1848.

“ In order to accomplish the former object, the locomotives were supplied from the canal adjoining the station. The water was forced up by pumps into a tank, and from thence conveyed to the engines when required. But the exorbitant demands which the Canal Company made for such supply induced the Directors of the Railway Company to sink a well in the centre of the factory then erecting. This was in 1840. Accordingly, a well fifteen fathoms deep was sunk, and the water brought up by an engine to another and larger tank, erected by the side of the former one, but capable of communicating by a main pipe, so that, in the event of any deficiency from one source, there might be a supply from the other. As soon as the well, tank, &c. were complete, the engines were wholly supplied by this water ; but, in the course of a few weeks after its use, the drivers found that they experienced great difficulty in getting the steam up ; the water required more fuel, the trains were after time, the boilers and the machinery were much furred and clogged, and the foam or scum on the surface of the boiling liquid was such, that, after several failures and disappointments, they were reluctantly compelled to abandon the use of the well-water, and once more return to their supply from the canal.

“ The houses were now rapidly increasing ; and the next question seems to have been, how these dwellings should be furnished with water. The pipes were laid on to the houses from the well-tank in three or four streets, whilst, in some others, pipes from both tanks were supplied.

“ It appears, therefore, in the history of this spot, that about the year 1841 the inhabitants were supplied wholly by well-water, and the locomotives by canal-water. But it was soon observed that the use of the former beverage gave rise to a singular but unequivocal train of symptoms of derangement in the stomach, bowels, &c. The directors at length were satisfied that the well-water was not only unfit for their engines, but that it was not altogether a wholesome beverage. But then the difficulty arose how these inhabitants should be furnished with a different water. The houses subsequently built were accordingly supplied with ‘ half-and-half,’ or partly well and partly canal-water.

“ Notwithstanding this arrangement, there was a constant complaint, especially by the new-comers, that the water disagreed with them : and the men broke out in eruptions over the face, hands, and neck, and the women and children were the subjects of a much more distressing train of symptoms.

“ From the year 1841 to the autumn of 1847, a large number of cases were attended by the medical gentlemen of Newport Pagnel, Stony Stratford, and the practitioner at the station, yet the Company were then in the habit of sending cases occasionally to the assistant physician of this hospital ; but it appears, that about the autumn and winter months of 1847 and 1848 the water, especially of the well, became unusually thick, yellowish, and loaded with extraneous vegetable matter.

“ Since the 1st of January of the present year, 110 out-patients have been sent to Middlesex Hospital from Wolverton, exclusive of surgical cases. There has also been a large mortality from pulmonary complaints at the station, the patients, chiefly children, having been attended by the resident medical practitioner.

“ A large proportion of the out-patients above mentioned came under my charge as the resident medical officer, on account of their arrival at irregular hours, and I was struck with the uniformity of their symptoms.

“ Of these 110 cases, of which I have carefully preserved an abstract or outline of the diseases, &c., there were thirty-seven males and seventy-three females. Of these males, eighteen were under the age of twelve years, and the remainder were boys or men employed in the factory. Of the females, there were also eighteen under the age of twelve, and the remainder were married women with families, except in two or three instances.

“ But, in order to present the subject in its most important and interesting view, I am desirous of classifying the whole number under two distinct heads, *viz.*, those who partook of the well-water *exclusively*, and those who were supplied by the mixed, or canal and well-water, and the striking difference in the character of the respective diseases will be apparent.

“ There were sixty-one cases (as the sixty-second patient lived at Stony Stratford, and walked to his work daily at the station) who were sufferers from the injurious effects of the well-water, and forty-nine of the mixed water.

"My register of the cases specifies the sex, name, age, locality in Wolverton, the period of residence at the station, the state of health before such residence, the towns from whence they came, and the date of their illness, its rise, progress, and their present symptoms, together with the observation of any peculiar features in the disease, and its termination, &c.

"The diseases may be divided into two classes. The first class were chiefly amongst the young men, boys, and children, and soon after their arrival in the town they presented the following symptoms: scaly or desquamating surface of the face and neck, porrigo of the head, or psoriasis of the neck, hands, and arms, or urticaria. Febrile excitement, with more or less disturbance in the bowels, loss of appetite, cough, and disturbed sleep.

"Amongst the second class of sufferers from this water, there were the following more serious, distressing, and intractable symptoms:—constant frontal headache, *muscæ volitantes*, dizziness of sight, temporary loss of consciousness, impaired memory, recurring three or four times a day, excessive prostration of the mental and bodily powers, palpitation, pulse varying from 100 to 120, sometimes intermittent, skin feverish, tongue clammy and furred, bowels costive, and constant gastralgia, with tenderness on pressure. No appetite, disturbed sleep from frightful dreams, a dry, harsh, and straining cough. The cerebral symptoms, in some instances, were attended with distinct epileptic fits, especially in one lad of seventeen, who was seized with nine successive attacks in one day; but it is important to notice here that the lad lost the attacks of giddiness, &c., when his uncle, who lives a mile from Wolverton, allowed him to lodge with him, and he walked to the station to his work, but never took his meals there. He expressed himself as not feeling like the same, since he resided at the house of his relation. They all complained more or less of a peculiar coppery or foul taste upon the tongue in the morning, and of the total loss of appetite for breakfast.

"Although I have divided the class of patients under two heads, for the sake of drawing a line between the two characters of disease with which they were affected, yet, in reality, the sufferers from the mixed water presented the same train of obstinate and severe complaints as did those from the well-water, with this difference, that the symptoms in the latter class of patients were more obstinate, more decided, and were never accompanied with the presence of entozoa. Whilst in many of the cases from the canal-water there were unequivocal evidences of the existence of *tænia lata*, *ascaris*, and *ascaris lumbricoides*, and after they had been expelled by the usual anthelmintics, as turpentine, pomegranate root, &c., and steel, the symptoms corresponded with those of the patients who partook wholly of the well-water.

"In consequence of observing that all these patients exhibited much uniformity in their symptoms, I was induced to note them down, and at length I waited upon Mr. Creed, the Secretary to the Company, at Euston Station, and informed him of my suspicions. This gentleman, after thanking me for the great trouble I had taken in investigating the subject, requested me to have an interview with Mr. Dockray, the superintendent engineer. I acceded, and found that he was not altogether a stranger to the suspicious character of the water; but he was under the impression that it merely affected new-comers, and that its evil effects soon wore away as the people became accustomed to it, and were able to bear it. In this latter opinion I corrected him, inasmuch as I pointed out the fact that there was a larger number of cases now than had occurred for a long time. However, he was most anxious to obtain all the information possible, and inquired what I would suggest. I proposed that the two waters should be analyzed by our Professor of Chemistry, Dr. Ronalds, and I left him twenty-four questions, to which he promised to forward replies of undoubted accuracy.

"The waters were sent, and the analysis was made, and my questions were faithfully answered, when the following valuable facts came to light. The well-water was proved to be a weak saline and alkaline spring, and the canal-water a tolerably pure soft water.

"Here, however, I must digress a little, in order to return to the subject of the diseases. Until my suspicions were raised that this water was saline and alkaline in its character, I had treated the majority of cases with hydrochlorate of ammonia in some bitter infusion, with an occasional aperient of compound decoction of aloes, or aloetic pills, and by using either the ointment of creosote, the weak nitric oxide of mercury, or chalk, to some of the severe

cases of eruptive diseases, but, in nearly all the instances, it proved unavailing. When, however, the valuable chemical discovery was made that the well-water was a simple alkaline spring, I immediately commenced a totally opposite treatment. The nitro-hydrochloric acid, with or without steel, in some bitter infusion, was now substituted. The eruptive diseases were treated by weak nitric acid lotions, the patients were strictly enjoined not to use the well-water for culinary purposes, and the improvement in their health was very marked and decided, except in two or three instances, where, I afterwards found, I had neglected to warn them not to use the water for the purposes of cooking their meals. But, even in these few instances, they made more progress when it was left off than before.

"So singular and so uniform were the symptoms of the whole class of patients, that I do not exceed the bounds of truth when I assert, that if a patient presented herself, and informed me of the street she lived in, I could repeat her ailments almost word for word before I interrogated her. If she was from Ledsom or Creed Streets, she would labour under the distressing cerebral symptoms already alluded to, with palpitation, hurried pulse, feverish skin, and total prostration of physical and mental energies. If she resided in Walker, Bury, or Cook Streets, or the North Cottages, I might find, in addition to the above symptoms, unequivocal evidences of tænia, or lumbrici, whilst, if they were children, the presence of ringworm, psoriasis, and ascarides were more or less observed. One instance I cannot refrain from alluding to; it was that of a boy eleven years of age, who, with his mother, became patients in the early part of January. They had resided in Bury Street, and had therefore been supplied with the mixed water; they were natives of Stony Stratford, two miles distant from the station, and had been in Wolverton eighteen months. The mother was seized in October, 1847, with vertigo, frontal headache, loss of appetite, palpitation, alternate flushings, and clammy perspirations; and the boy, in November, was attacked with blindness and double strabismus, with constant weight over the forehead. They had both been under medical treatment for some time in Wolverton, without avail; and, observing the equivocal nature of nervous symptoms in many of these poor people, I was led to conclude that the squint and headache arose from mere cerebral distress rather than cerebral disease. He was ordered an emetic twice a week, and a dose of turpentine and castor-oil to be given on the morning succeeding the emetic. When he had pursued this plan for a fortnight, the mother and myself were gratified to find that the boy's sight returned, the strabismus diminished, and his health improved; but it was co-existent with the escape of a large number of joints of a tænia lata, and numerous ascarides. He was discharged quite well before the end of January, and the mother has greatly improved also under the use of steel wine in a bitter infusion. A man is now in attendance upon Mr. C. de Morgan, who has charge of the Ophthalmic department, with partial loss of sight in the left eye, and impaired vision in the right, attended with muscæ volitantes. He is a native of Leeds, and had resided in Ledsom Street, Wolverton (well-water), for ten months. This attack crept on after he had been there four months: he is greatly improving.

"I will now pass on to the interesting but important facts communicated to me by R. B. Dockray, Esq., and Dr. Ronalds. The nature of the earth about Wolverton, for the first fifteen to twenty feet, is a mixture of limestone and white marl, and below that depth it is a blue greasy clay. This clay I have a specimen of, as it was taken from the well; and its consistence, appearance, and chemical qualities exactly correspond to that of "fuller's earth," so common in the county of Bucks, that is to say, silica, alumina, magnesia, lime, chloride of sodium, with traces of potash and oxide of iron. It will be seen presently that these elements enter largely into the saline ingredients of the well-water. It is forced by a stationary engine into a large cistern in the roof of the factory, and supplies the schools, Creed, Ledsom, and Young Streets, and Glyn Square. The mains are cast iron, whilst the services are partly lead and partly iron pipes.

"The locomotives are supplied by the canal, which is also worked into a large cistern on the top of the factory, some distance from the well-cistern, but it is connected with it by a cast-iron main and stop-cock. The inhabitants of the North Cottages, Bury and Gas Streets, have a mixed supply of well and canal-water. But these supplies are far inferior in quality to the clear and pleasant springs existing at a public-house, "The Engineer," and the Parsonage House, near the station. The drainage is excellent, and no suspicion of poison can arise from any

imperfection in this department; indeed, the whole train of symptoms in all the cases does not favour the supposition of an animal malaria*.

"The following is the substance of a report which I forwarded to the Directors in London, in which I have endeavoured to explain the *modus operandi* of these waters when used as a beverage:—

"The well-water of Wolverton, of which the chief part of the inhabitants drink, is proved by analysis to be a

* ANALYSES OF SEVEN WATERS IN AND AROUND THE STATION.						
No of Specimen.	Specific gravity.	Hardness by Soap Test.	Saline Matter per gallon.	Organic Matter per gallon.	Total Solid Matter per gallon.	Nature of Saline Matter.
1	1.00079	37°.95	53.8	26.6	80.4	Chlorides of Sodium and Potassium, Sulphates of Soda and Potash, Sulphates and Carbonates of Lime, Silica, Alumina, and Oxide of Iron.
2	1.00049	24°.9	29.7	3.1	32.8	The same as No. 1.
3	1.00059	26°.2	35.2	5.4	40.6	The same as No. 1, but no Alumina or Sulphate of Lime.
4	1.00066	32°.4	54.5	Traces	54.5	The same as No. 1, with the addition of Carbonate of Magnesia, but no Sulphate of Lime.
5	1.00058	31°.5	43.4	Traces	43.4	The same as No. 4.

No. of Specimen.	Specific gravity.	Degree of Hardness by Clarke's Test.	Total amount of Solid Matter per gallon in grains.	Organic Matter per gallon in grains.	Saline Matter per gallon in grains.		Nature of the Saline Matter.
					Soluble after Evaporation.	Insoluble after Evaporation.	
6	1.00025	13°	20.1	2.8	3.72	13.58	Carbonate of Lime with a trace of Magnesia. Oxide of iron and Alumina in small quantity. Sulphates of Soda and Potash. Chlorides of Sodium and Potassium in small quantity. Silica.
This water is of a dirty yellow colour, is distinctly alkaline to test paper; it contains chiefly bi-carbonate of lime in solution, and rather more organic matter than should exist in water for drinking.							
7	1.0005	13°	42.78	2.34	26.78	13.66	Free Carbonic Acid. Carbonate of Lime with a trace of Magnesia. Sulphate of Soda in large quantities. Sulphate of Potash. Chloride of Sodium in large quantity. Chloride of Potassium. Carbonates of Potash and Soda. Silica. Oxide of Iron and Alumina in small quantity.
This water is remarkable for the large quantity of alkaline carbonates, sulphates, and chlorides which it contains, and which render it a weak saline water.							
In addition to this analysis, it should be observed that the temperature of the canal is 46°, whilst that of the well is 53°.							

No. 1.—Water from the Well in the Refreshment Room.

No. 2.—Water from the Blue Bridge Cutting, 1½ mile from the station.

No. 3.—Water from the Well at the Parsonage House.

No. 4.—Water from the Well at the Royal Engineer Inn.

No. 5.—Water from the Well at the Radcliffe Arms' Inn.

No. 6.—Water from Canal at Wolverton.

No. 7.—Water from Well at Wolverton.

weak mineral spring, similar, though feebler in character and in component parts, to the celebrated German water at Marienbad, called the *Ferdinandsbrunnen*, to which water invalids resort from all parts of Europe*.

"This comparison will appear the more striking when we glance at the analysis of good soft water. This always contains a small quantity of carbonate of lime, a still smaller proportion of chloride of sodium, and a trace only of silica, chloride of lime, sulphate of potash, and carbonate of soda, whereas we find in the Wolverton Spa that not only are there salts totally foreign to good soft water, such as sulphates of soda and potash, and carbonate of soda, with free carbonic acid, but even the ordinary salts of soft water superabound in this Spa, and three, which are not found in the Marienbad Spa, are found in distinct quantities in this water; these are sulphate of potash, chloride of potassium, and carbonate of soda.

"These proportions of solid matter in the Wolverton Spa, as compared to the *Ferdinandsbrunnen*, are nearly as six to thirty-four. The invalids who resort to Marienbad for the use of the water are those who labour under a disordered state of the mucous membrane of the stomach and bowels, or under impaired digestion or sluggishness in the circulation of the organs of the abdomen, giving rise to congestion in them. The amount of salts in the Wolverton mineral water may appear small to those unacquainted with the character of spas in general; but it is not their minuteness of quantity only which gives to the water a decided medicinal agency, but it is that natural combination of several salts in it which operate so subtly, powerfully, and irresistibly upon the animal economy, that all chemical or artificial means to deprive it of this action are baffled, or, to quote the words of a celebrated writer on mineral waters, Dr. Franz,—

"‘When several salts of different kinds are dissolved in pure water, as in the case of mineral springs, their latent properties are not only developed and rendered fit for operating, but a new chemical process is also occasioned, in which reciprocal action takes place. In whatever the said process may consist, this much appears certain, that the medicinal property peculiar to each individual salt is not lost or destroyed, but only modified, by the influence the various salts exert upon each other, whilst co-existing in solution,’ so that, as Dr. Struve observes, ‘no one ingredient is unimportant; but even the smallest proportion of one, which may appear to be of no value, has its share in the entire action.’

"It has come to my knowledge lately, that two persons, a physician and a lady of rank, have imprudently ventured upon taking a continental spring; the latter individual partook of the spring I now allude to, at Marienbad.

"The pulse of both rose to 120, and in the instance of the lady continues to range at that height to this day, and in the former case it remained for many months at that unnatural standard; but, what was far worse, in both instances they have subsequently presented unequivocal evidences of diseased heart and lungs.

"If the imprudent drinking of a glass or more of this mineral water during four or six weeks has been the cause of such permanent disturbance of the whole system, is it to be wondered at that the use of this mineral water at Wolverton, in all articles of cookery, and in the drinking it cold or hot, should produce the maladies which seem to abound in this town? In the progress of administering the Marienbad waters for the eradication of inveterate diseases of the skin, specific eruptions most commonly make their appearance, and thus the original disease is removed by the production of a new and peculiar one over the body. ‘In general, however, I have observed that

* "To prove this fact, it is necessary to make a comparison from an analysis of the two waters; that of Wolverton, &c., made by Dr. Ronalds, at my suggestion, and that of *Ferdinandsbrunnen*, made by Berzelius and Steinman."

WOLVERTON WELL-WATER.

Free carbonic acid.
Carbonate of lime, with a trace of magnesia.
Sulphate of soda in large quantities.
Sulphate of potash.
Chloride of sodium in large quantities.
Chloride of potassium.
Carbonates of potash and soda.
Silica.
Oxide of iron and alumina in small quantities.

MARIENBAD WATER.

Free carbonic acid.
Carbonate of lime, with nearly an equal quantity of magnesia.
Sulphate of soda in large quantities.
No sulphate of potash.
Chloride of sodium in large quantities.
No chloride of potassium.
Carbonate of soda, but not of potash.
Silica.
Oxide of iron and alumina in small quantities.

the continued use of saline mineral waters produces critical eruptions on the skin, still more so when they are drunk warm, or belong to the class of thermal springs*.

"In like manner also do obstinate eruptions on the skin break out in the new settlers in the town of Wolverton; and so well known is this circumstance, that many of the Directors are fully aware of the fact.

"The majority of cases which have come under my notice for medical treatment have been females, whilst those families who reside in the streets the houses of which are wholly supplied by well or mineral water, have presented a more inveterate character in their diseases than those in the families residing in streets supplied partly by well and partly by canal-water. It is remarkable that the sufferers in the former instances have always exhibited a train of undeviating symptoms, more or less formidable, which are precisely analogous to the severe disturbance which follows the imprudent use of the Marienbad Spa. I allude to such series of symptoms as the following: vertigo; severe and protracted head-aches; palpitation; restless sleep; distressing fulness over the forehead; and sense of temporary loss of consciousness, recurring at frequent intervals through the day and week; loss of appetite, &c.; and these symptoms are more or less complicated with pulmonary congestion, intestinal worms, and eruptions.

"It may be asked why the greater part of the few sufferers who visit this Hospital are chiefly females and children, and why should not the men be affected in like manner? The answer to such an inquiry is that some of the men are so affected, and that not more are so may be attributed to the labour and exertion of their daily occupation, whereby a vast quantity of these soluble salts are thrown off by means of perspiration†. For example, if this mineral water was drunk by the females medicinally, at the rate at which the Marienbad Spa is taken—that is, from one to three tumblers every morning—its action upon the bowels would be such that probably its injurious effects upon the system would not be so appreciable; at all events, the symptoms might not be characterized by such serious disturbance as now follows its gradual introduction into the body, and thus its sudden action upon the alimentary canal would leave the females in some such state as the free perspiration of the labouring men in the factory leaves them, that is, in a partially disturbed state of system only; but this view of the case, it may be affirmed, is only problematical; however, I would observe, it is fully borne out by the facts which are occurring in the town from week to week. I shall now advert to these facts.

"The Wolverton inhabitants come from all parts of England, and are for the most part in robust health on their arrival, but their constitutions are soon unstrung by the use of this water. Persons who have gone to Wolverton with an acidulous state of stomach may have improved somewhat in health for the first three months under the use of this alkaliescent water; and, although such may be here and there the fact, yet I doubt nevertheless whether it is a real improvement, considering that such water, instead of being drunk cold from the well, and taken as a natural medicine, is boiled, and throws up its scum and froth, and is thus introduced slowly into the constitution under its most deleterious form.

"Another striking illustration of the pernicious tendency of this mineral water is derived from the collateral evidence of the injurious effects of a bad or unfiltered supply of the canal-water. It is a fact that the ova and subsequent propagation of intestinal worms are conveyed into the human system by means of river or surface water,

* "Dr. Granville's 'Spas of Germany.'"

† "A very shrewd suggestion was thrown out by the reviewer of this pamphlet in 'The British and Foreign Medico-Chirurgical Review'; 'Is it not much more likely that, the chief beverage of the workmen being malt-liquor, they imbibed a considerably smaller amount of the pernicious water than did their wives and children, whose consumption of water and tea was probably much more considerable?'"

"We have given the details of this case, not merely because it is one of the most remarkable we have ever heard of, as well as the most recent, but also because it is probable that, under the Sanitary Bill, measures will be taken for procuring a public supply of water to many towns which are at present destitute of it; and we would urge upon our readers that they would do all that in them lies, to secure the most wholesome source that can be attained, as well as the most perfect freedom from subsequent contamination by leaden pipes, which has been a source of disease in many towns whose supply of water is derived from them. That no mischief has resulted from this method of conveyance in one locality is by no means a satisfactory guarantee against its injurious consequences in another, since the action of water upon lead depends upon the proportion of its carbonic acid, saline ingredients, &c., and the effects of any given combination can by no means be predicated with certainty."

* "This is the more probable explanation, as I know that the men partook of beer which was either brewed at Stony Stratford or at Newport Pagnell, where no such diseases occurred, and that no beer was made at the station."

whilst this form of *entozoa* rarely occurs in man so long as he is supplied with genuine well or spring water. But when man is debarred from this character of pure beverage, and is necessitated to take river water, however clear and wholesome it may look and taste, yet are the ova of intestinal worms conveyed thereby into the system, which even the act of boiling does not destroy. While I make these remarks, which are based upon the interesting experiments recorded by Dr. Watson in his valuable Lectures, p. 500, vol. ii., I am bound to say, that though after the boiling of the water by M. Schulze, of Berlin, that liquid, as soon as the process was stopped by which he kept out the animalculæ, was immediately filled with living infusoria; and they must either have been the vital germs of the old insects, or they must have been an immediate deposit from the atmosphere, which found a suitable nidus in the water of a river, while they recoil from such a bed as that of a healthy spring. The propagation of this parasitical disease is materially furthered by a deranged state of stomach, and debility of the organs of assimilation. Now the Wolverton inhabitants, who have suffered, amongst other diseases, from worms, are those only who have been supplied with the canal-water, whilst at this moment I have not a single case where this complaint has been mixed up with other more distressing symptoms in those who have wholly partaken of the well or mineral water. But a curious fact also presents itself here too, for, whilst the mineral water deranges the stomach and bowels, and aids in the production of that very state which is favourable to the development of worms, so also, whilst it is drunk in combination with the canal-water, the ova in the latter fluid find a favourable nidus for their development in such weakened stomachs; the inhabitants of Cook and Walker Streets, and the North Cottages, present a striking example of this cause and effect.

“On viewing the analysis which has been furnished by Dr. Ronalds, and investigating the various collections of sediments sent to me by Mr. McConnel, the Wolverton superintendent, found in the well and tank, it would certainly appear that the well-water is peculiarly astringent, depositing a large quantity of alkaline earths, analogous in composition to fuller’s earth, and which is, in itself, a sufficient argument in favour of its injurious influence upon the animal economy, whilst, on the other hand, the composition of the canal-water is so closely allied to wholesome river water, that, but for its unfiltered state, it might be made available for all culinary purposes. This water must undergo a certain amount of circulation with its locks, tributary streams, and surface supply, so that, when properly filtered, upon the scientific principles adopted by the River Company in London, it might be rendered, at a small expense, a very wholesome beverage.

“The long-continued sweetness of the Thames filtered water taken in by the shipping at Blackwall must be familiar to the Directors of the Company.”

I will now pass on to a brief consideration of the next disease in the present classification, which is PHLEBITIS. Its pathology, however, has been touched upon when describing the acute form of hepatitis, with the deposition of fatal abscesses scattered throughout that gland. But I must enter somewhat more into detail respecting this formidable and insidious disease.

It frequently happens that one or more capital operations are performed in hospitals about the spring or autumn, during a period too when the weather is especially foggy, and the atmosphere cloudy and charged with moisture, and the case, perhaps one of amputation, goes on favourably for three or six days; whilst another, it may be that of extirpation of some fatty tumour, is attacked with acute and severe erysipelas, and the latter disease proves fatal in a few days; the stump of the former begins to present an unhealthy aspect; his spirits become depressed; he has a pasty, anxious, and greasy face; his tongue exhibits a brownish fur upon it, his appetite falls off; and slight diarrhœa sets in. Now, I think it may be affirmed that, if such a change in our patient’s condition ensues after the amputation of a limb, and these symptoms are followed, in the course of twenty-four hours, with one or more shivering fits, which present some of the characters of ague, we may strongly suspect that inflammation of one or of more veins is established; that pus has been formed by the vasa vasorum of these veins, and that this poison has been carried into the general circulation, and is exhibiting its pernicious influence in the symptoms already described. Delirium, frequent and severe rigors, succeeded by draining perspirations, hectic, diarrhœa, and death, now follow on in rapid succession. The *post-mortem* examination may perhaps detect purulent deposits in

the lungs, and along the course of the veins of the diseased limb, and the pus is found to be lying on the areas of the extreme pulmonary veins; while, on the other hand, neither the lungs, liver, nor diseased extremity, may exhibit any trace of inflammation, but a small portion of the saphena or of the femoral vein of the opposite limb presents evident marks of disease; and there are purulent deposits in one or more serous cavities, with disorganization and purulent effusion into one or more joints. Whenever the rigors *succeed*, and are *not* antecedent to the febrile symptoms, and when they follow each other without observing any stated period, we may ordinarily pronounce that they arise from the introduction of this poison into the general circulation.

But let us take a glance at the disease as it more frequently presents itself to the physician, rather than to the surgeon: an instance is now before my mind. A female, who has always enjoyed good health, presents herself with the following appearance and symptoms. There is a wan, careworn countenance, a blanched face, dry and peeling lips, a red and glazed tongue; a quick and sharp pulse; some swelling of the ankles, the surfaces of which are shining, waxy, but do not pit. The urine is high-coloured, scanty, and turbid; the bowels are relaxed; and there is more or less vomiting. She states that, during the past catamenial period, she got wet in her feet; this vicarious discharge suddenly ceased, and general derangement of health followed it in a few days, with subsequent œdema of the legs. If firm pressure is made over one or both broad ligaments of the uterus, or over the crural arch and those portions of the saphena where they dip into the iliac veins, pain is experienced. These symptoms are further aggravated by several rigors succeeded by profuse sweating; we cannot doubt, under such circumstance, but that phlebitis exists. Leeches should now be applied throughout the course of the painful channels, and the limb enveloped in a large flannel soaked in equal parts of strong poppy and hop fomentations, and the whole surrounded by gutta percha sheeting. Small doses of Pulv. Sodæ c̄ Hydrargyro* may be administered, and the leeches must be repeated as long as there exists pain in the course of the veins. It certainly does not appear from experience that mercury exercises any specific control over this alarming disease, but yet some such alternative as that already mentioned seems indispensably necessary to check the baneful influence of phlebitis over the system. We will suppose, however, that the above treatment has so far benefited the patient that the œdema has subsided; the hectic disappeared; the secretions are resuming a healthy character, and the case is going on favourably, as we hope, when, after some slight exertion of the body, such as talking, or eating in the upright posture, the individual has suddenly fallen back in her bed, faintness, convulsions, and death have followed in quick succession. The only morbid appearances which the eye afterwards recognises are purulent clots, partially organized, which have blocked up the large veins of the legs or abdomen, and a velvety red appearance of the whole endocardiac membrane, with some paleness, and flabbiness of the muscular walls of the heart. In one case sent to us by Mr. Propert, the vena cava was plugged up the space of two inches above its bifurcation with the iliac veins, so that it could scarcely admit a common probe; the preparation is now in the Hospital museum. In another instance the patient, also a female, became so unwieldy and swollen, both in the legs and thighs, as well as in the abdomen, that she was placed on Earle's bedstead during three months, and was unable to walk without crutches for six months. Her legs and thighs exhibit, to this day, the most extraordinary group of large, varicose, and inosculating veins, and she is repeatedly under care as a surgeon's patient for inveterate ulcers on one leg or the other. The same line of treatment was pursued in this instance as that which I described in the above fatal case.

A few years ago we had a delicate and amiable pupil who officiated for the house-surgeon during several weeks. He was attacked with ordinary sore-throat, for which he asked me to prescribe something, and I did so; but in the course of two days ear-ache, slight deafness, and fever set in, which I attributed to the occurrence of continuous inflammation along the Eustachian tube. However, trivial as it appeared, he was, nevertheless, urged to leave the unwholesome air of the hospital, and to join his friends in an open part of the West End, which he accordingly did, but in a few days more he became delirious, shiverings arose, succeeded by profuse sweatings, and he died in a few weeks. The small bones of the ear were found to be destroyed, and pus was in the cavity of the tympanum;

* I have already detailed the form of this excellent preparation.

inflammation of the jugular vein and lateral sinus of the brain on the same side also existed, together with acute pericarditis.

I am unable to offer any remarks upon the treatment of this insidious and fatal disease beyond local depletion, mild alteratives, and generous diet ; but it should especially be borne in mind that, where the disease is recognised, the patient, although he may reside in a tolerably pure atmosphere, should, if possible, be removed to another aspect, as the situation of one house may, unknown to us, be productive of some secret malaria, which is not found in the atmosphere of a neighbouring spot.

I have known patients with inveterate ulcers of the leg to be occupying our surgical beds on the ground-floor for four or six weeks, where they made no progress whatever ; when an unusual number of accidents have been admitted into it, we have been necessitated to remove such chronic cases into the second floor, and, to our surprise, the ulcers have unexpectedly and rapidly healed, and the patients have soon left the building. In one instance, that of a labouring man, sixty-five years of age, his convalescence, however, was only temporary, for as soon as the discharge ceased, and the ulcer had cicatrised, he was seized with sanguineous apoplexy, and died in a few hours *. In the years 1832, 1833, when cholera and spotted fever committed its fatal ravages amongst the poor of the metropolis, I well remember that in almost every other operation, whether capital or not, which Sir C. Bell and Mr. Mayo performed, the fatal symptoms of phlebitis arose within a few days afterwards. Purulent depositions in the pulmonary capillaries were found in the majority of instances. It should be observed, also, that then, as well as at the present time, this epidemic, as it would appear, usually supplanted erysipelas, since the latter disease was scarcely observed during the period that the former one was so prevalent in this and in other large hospitals.

The term RUBEOLOID or spotted FEVER, has been given to that form of the disease which is accompanied with a papular eruption over the body which exactly resembles measles.

I have already observed, that the worst forms of this disease are seen in the hospitals of large towns † ; and it frequently happens that we are called upon to admit a poor, destitute, and filthy patient who has crawled to the admission-room, and is in an exhausted state. He is stripped of his rags, placed in a warm bath—his head is shaved, and clean linen is afforded him. His countenance at this period is heavy, dusky, and expressionless ; his skin is hot and dry ; his pulse small and quick ; and the prostration of his strength is extreme. In the course of a few hours, and when reaction has been established, the features become more excited ; the head is hot, and the body sprinkled with an eruption, which many novices in this form of London fever have mistook for measles. We make it a rule to shave the heads of such patients at the outset, to place them in a large and an airy ward, and not to allow any curtains to the beds. It is a very rare event to find nurses, and much less patients, attacked with fever. The chlorate of potash, in the form of a drink, is now prescribed, a drachm of the salt to a quart of barley-water, and beef-tea is required to be given early in the disease ; the lungs are soon found to be congested in their posterior and lower lobes, for which a large blister is applied to the chest, whilst our squill-draught ‡ is ordered every six or eight hours, intermediate with the compound grey powder. I am satisfied that such a line of practice, with or without wine, has been the most successful in these wards. We have had some instances where the patients have craved for an excess of salt in their beef-tea, and they have swallowed with avidity that which tasted more like brine to our palates §.

We lately received a female servant (out of place), who, it was stated by some lodgers, had been lying a fort-

* Whenever an ulcer of the leg breaks out after the age of sixty, and there is, or has been, some giddiness, and occasional pain in the forehead, or oppression of breathing, or palpitation, and the pulse is hard and full, it seems to be ill-judged practice in surgery to attempt to heal such ulcers, however disagreeable and unpleasant they may be to the patient.

† Dr. P. M. Latham was in the habit of sending his clinical clerks into the purlieus of that filthy neighbourhood Saffron Hill, Field and Cow Lanes, &c., in order to pick out some of the most inveterate cases of this disease, and bring them to St. Bartholomew's Hospital ; and I have gone into hovels, or ground-floors, which have been used as public *cabinets d'aisance*, and have found three or four of a family huddled on a straw mattress, suffering from the worst type of this disease.

‡ This draught is thus composed : R. aceti scillæ, ʒss. ; sp. æther. nit. ʒi. ; liq. ammon. acet., ʒiiss. ; aq. pimentæ, ʒi. Fiat haustus.

§ May not this disease, which was such a scourge amongst the poor subsequent to the occurrence of cholera in 1832, be regarded in some points as similar to the latter epidemic ? The blood is vitiated, and blackened by carbonaceous principles, and the *modus medendi* by saline remedies in the one, seems very analogous to that in the other.

night in bed without medical attendance or nursing. Those who brought her knew but little of her history; and the patient was so exhausted and delirious, that we could gain no satisfactory information from her respecting the duration of her illness or of her present ailments. It was considered, however, to be a case of fever. The countenance was flushed; the conjunctivæ suffused; the skin hot and dry; and the pulse quick and feeble. The evacuations were passed involuntarily, and there was great difficulty in swallowing. The most singular feature of the case, however, consisted in the following symptom. Her tongue was continually rolling itself around the mouth, which she kept so firmly closed, that all efforts to open it were fruitless; but ever and anon she would drag down the lower jaw, when this action was immediately followed by a copious flow of limpid water, which had collected in the mouth; it was not saliva, but it rather resembled the non-aerated fluid which is ejected in water-brash; the quantity which was thus discharged must have been very considerable, as the clothes were saturated with it, and the linen of the bed required to be frequently changed on account of it. The head was shaved, and the treatment already mentioned was resorted to; but in the course of two days increased coma ensued, sloughing, to the extent of a crown-piece, had taken place over the sacrum; there was perfect incontinence of urine, and the delirium was incessant. The case appeared now to be almost hopeless; but we observed, at this period of the disease, that the left conjunctiva was more inflamed, while the right had become pale; the left eyelid drooped also, and there was supposed to be less power and motion in the left than in the right arm.

She was now put into the delirious-room, placed upon a rheioclinal, and the first treatment was abandoned, while Dr. Hawkins ordered our compound mercurial bolus*. The result of this practice was most gratifying; for, in a few days, a copious secretion of urine came on, and with it such an improvement in the power of the mind and will, that she would call for the nurse when she required the night-chair; the slough, of course, now rapidly came away, and its edges did not extend; the inflamed conjunctiva improved, and consciousness gradually returned; the gums became slightly vascular, and, at the expiration of a week, she took the bolus once instead of three times a day, and shortly discontinued it altogether. In the course of six weeks she was convalescent.

The above instance may serve to illustrate the difficulties which beset the hospital physician in arriving at an accurate diagnosis of his patient's malady; and it frequently happens that an individual is admitted, as the one just spoken of, with symptoms which, if taken collectively, would preponderate to favour the supposition that it was fever; whereas, if an isolated feature of the case is viewed, such as the inflamed conjunctiva and drooping eyelid, his peculiarity of the case may act as a key or an index to unravel the remaining intricate marks of the disease.

CLASS VI.

Division II. *Vascular Diseases in Atony; Countenance languid.*

From Purpura.

„ Scurvy.

„ Erythema nodosum.

This forms the concluding part of the classification of diseases, and I must confess that I have nothing to offer in the way of elucidating, or of treating these disorders, beyond what is already known, or has been described by

* The following combination has received this title: *R. hydrargyri purificati, gr. x.; mannæ optimæ, ℥i.; pulvis scillæ recentis, gr. x.* The mercury is first rubbed with the manna, in order to "kill" the former, when the fresh squills are to be added. It is not essential that the globules should be minutely divided. This valuable preparation, which was introduced by the above physician into our hospital Pharmacopœia, has been prescribed by that gentleman with the most remarkable advantage in many cases of coma and of depressed vital powers, and where strong reasons existed for suspecting effusion into the ventricles, or chronic disease of the brain itself. In one instance of hydrocephalus in an adult, the copious flow of urine which succeeded its exhibition removed, in a few days, all symptoms of coma and approaching dissolution, and the patient may now be seen occasionally walking in the neighbouring streets.

the most eminent authorities of our profession. Of course we have rare opportunities of witnessing *SEA SCURVY* or *PURPURA*, though we have frequent instances of the latter disease in a mild form, and from time to time we admit a severe case of *land scurvy*. One instance of it has recently left the hospital convalescent. He was a tall, spare man, who obtained a livelihood by the scanty earnings of sweeping the crossings of our streets. He declared that he had not tasted meat or vegetables for six weeks prior to his admission, but had lived wholly on bread and butter, and tea. His appearance certainly was most deplorable, and pitiful. The face was sallow, the countenance haggard and distressed; the features pinched and sunken, and over the inside of the thighs, legs, and arms there was one universal dark blotch, from the effusion of subcutaneous black or venous blood. The edges of the gums were standing out as so many prominent fungoid growths, bleeding profusely, and there was also hæmorrhage from the fauces and bowels. He perfectly regained his strength and appearance, by means of a pint of lemon juice daily in barley-water, together with a full allowance of meat, potatoes, and porter. Some instances have occurred where lemon juice and potatoes have utterly failed to eradicate this disease of the blood, and recourse has been had to the dilute hydrochloric acid of the London Pharmacopœia in the proportion of fifteen to twenty drops three times a day with perfect success. Other inveterate cases have improved under the same quantity of oil of turpentine taken in the form of an emulsion.

With respect to *ERYTHEMA NODOSUM*, I need scarcely observe that we are seldom without one or more instances of this disease during the spring or the autumn. It is rarely witnessed in males, indeed I do not remember to have seen half a dozen cases on the men's side of the building; whilst its occurrence in females, immediately after some irregularity in the catamenial discharge, seems to imply that the disease is set up in consequence of a disturbed or an imperfect action of the uterus at this period. The most soothing application to the hot, painful, and throbbing eruptions is a cloth soaked in goulard water and laid over the swellings, and a piece of oiled silk outside the rag. The feet should also be preserved from the contact of the bed-clothes by a fracture cradle.

In bringing these remarks to a conclusion, I can but repeat what has either been said or implied before, and what must be sufficiently obvious to every reader, namely, that their whole tendency bears not so much upon the *science* of medicine as it does upon the many *practical* departments of our valuable profession. The subjects have been handled by me in a somewhat unconnected manner; and this is easily to be accounted for, when it is considered that my short evenings are not my own, since there is not one amongst them in which I have not been either interrupted, or have not expected so to be by various calls in the exercise of my official capacity. I have written by snatches, and often in moments when my mind was full of anxiety or hope as to the issue of many severe cases around me, together with the fulfilment of many duties too minute to describe. Added to which, during the writing of these papers, the hospital was, for the most part, pulled down and rebuilt, and I had the honour to be consulted upon many improvements and alterations which were suggested, as well as upon those which were adopted from the suggestions of my own mind; for which indeed His Grace, the Noble Duke to whom this volume is dedicated, most condescendingly offered me his thanks in person, at the same time that he gave me, in the most obliging manner, the permission to dedicate it to himself. Under these circumstances, the indulgence of the reader is asked for, and it is now hoped that he has found the plain simplicity only of truth, robed in that language which best becomes a plain man and a Christian; and that the Lord, who gave the power of discernment, in whatever degree that power may be, may bless any aim, however feeble, which professes to have for its beginning, middle, and end, the glory of Him in view, from whom every good and every perfect gift proceeds, is the fervent hope of his most unworthy servant.

APPENDIX.

I.

Thomas Fairbrother, ætat. 45 ; superficial Venous Anastomosis, the result of an Aortic Aneurism which obstructed the inferior Vena Cava.

The accompanying illustration exhibits an unusual anastomotic circulation, with dark patches of ecchymosis, on the surface of the body from an aneurismal Tumour of the Aorta five inches above its bifurcation into the iliac arteries. The aneurism was composed of two sacs; the interior one was about the size of a man's fist, and in some parts of its parietes there was a deposit of ossific matter. There was no clot in it; but it freely communicated with the inferior vena cava. To the right, and a little behind the former, was another sac, rather less in size, having a communication with it by an opening the size of a shilling; this sac was filled with organized fibrine. The vertebræ were partially absorbed beneath, and the transverse arch of the colon was diminished in its calibre for about three inches, the diminution being caused by its passing over, and resting upon, the aneurism. This diminution in size of the colon would account for the difficulty which was experienced in keeping the bowels open or in a regular state.

There was a deep-seated, feebly pulsating tumour, midway between the ensiform cartilage and the umbilicus, of one year's duration, which he could not account for, having never received any blow or other injury. *Vide pp. 122, 130.*

Post-mortem Examination of other Organs.

Face and head very much discoloured.

There was a greater quantity of fluid than is naturally found in the pericardium.

The lungs were hepatized almost in every part.

The heart was of natural size, and the parietes of each ventricle of normal thickness; their structure was perhaps a little softer than natural, but this might arise from decomposition. The tricuspid valves were healthy. The semilunar valves of the aorta and pulmonary artery were also healthy. The mitral valve was thickened in its structure, and its anterior lip had a deposit in it very like calcareous matter.

The aorta had lost its smooth, shining aspect, and its surface was rough and uneven, arising from a deposition of calcareous and atheromatous substances.

The kidneys and spleen were healthy and of natural size.

The liver was healthy, but smaller than natural.

There was a communication between the vena cava and the aneurismal sac.



II.

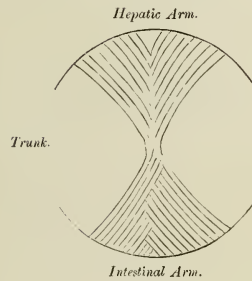
BONY EXFOLIATION FROM THE CRICOID CARTILAGE AFTER LARYNGOTOMY. *Vide* p. 69.

The subjoined sketch exhibits two aspects of the bone, for which I am indebted to the kindness of Campbell De Morgan, Esq. :—



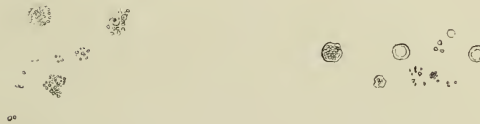
III.

SIMILITUDE OF THE TWO ARMS OF THE PORTAL VEIN, WITH ITS TRUNK. *Vide* p. 122.



IV.

INTER AND INTRA LOBULAR HEPATIC FAT GLOBULES. *Vide* p. 123.



THE END.



LONDON :
GILBERT & RIVINGTON, PRINTERS,
ST. JOHN'S SQUARE.

